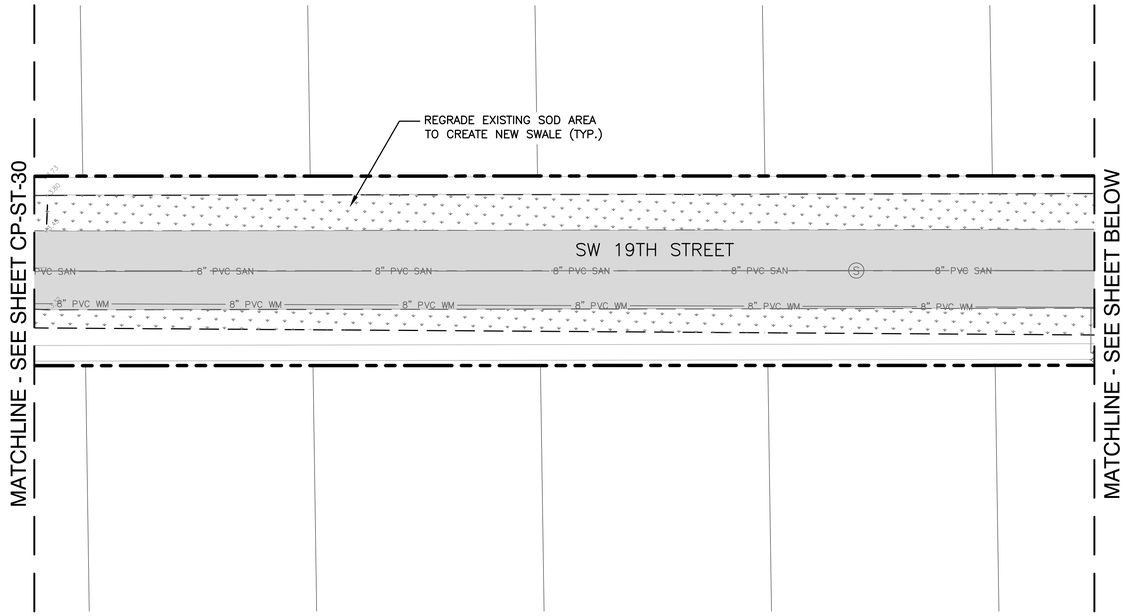

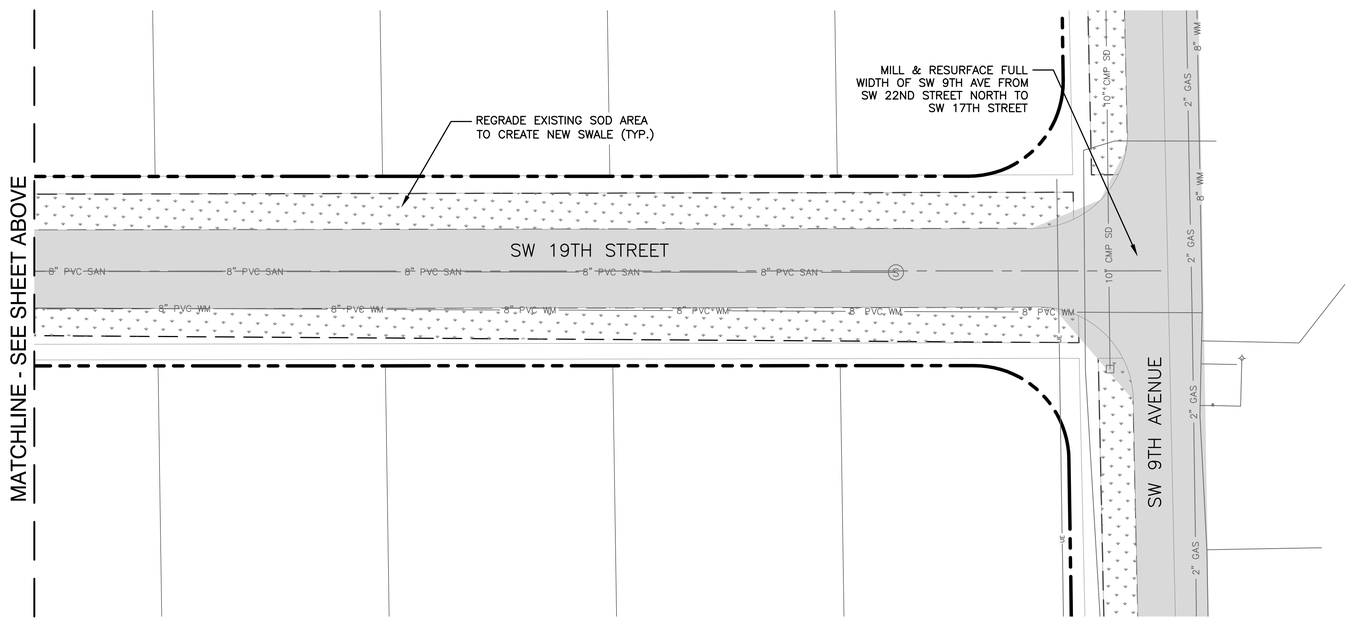

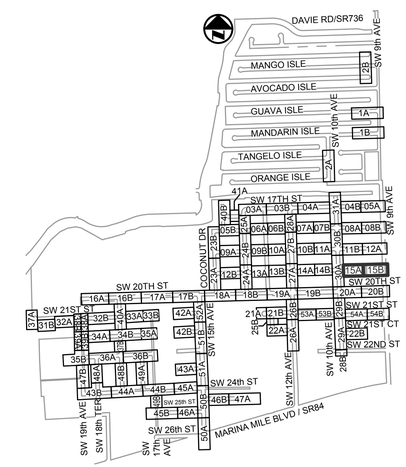

KEY MAP

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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FAX: (954) 739-6409 TEL.: (954) 739-6400
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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

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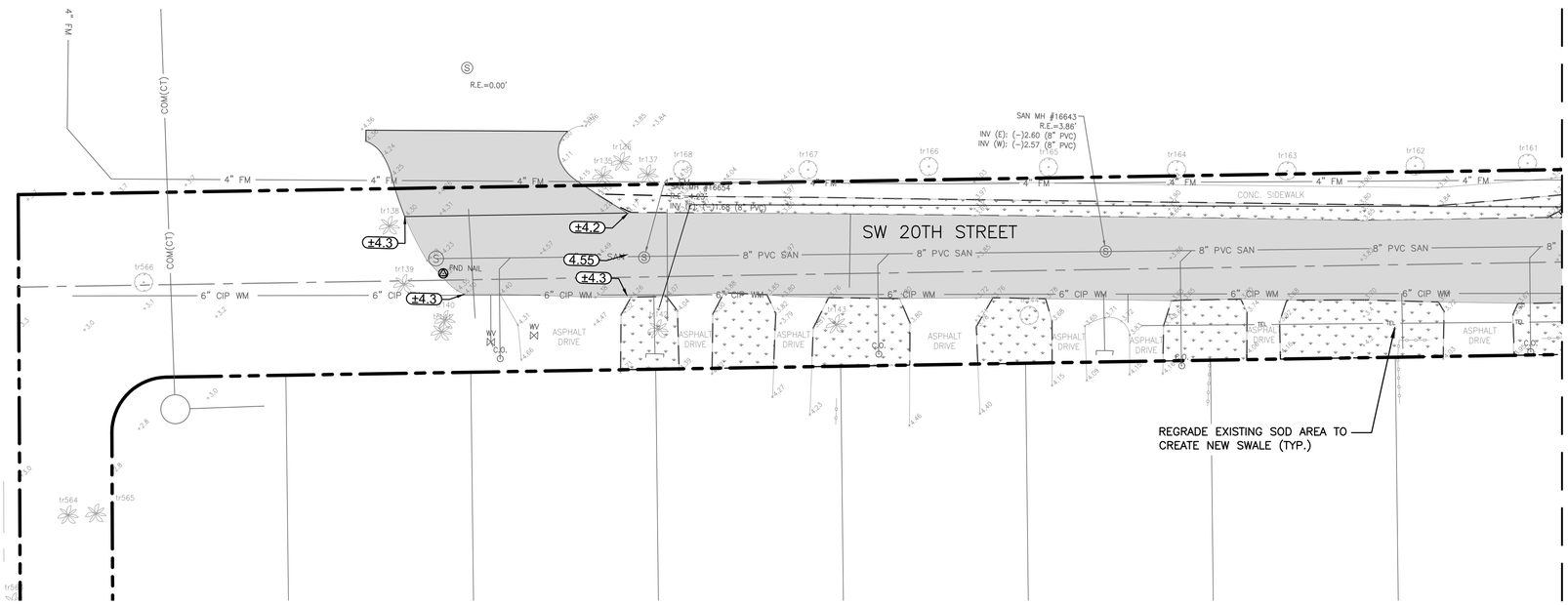
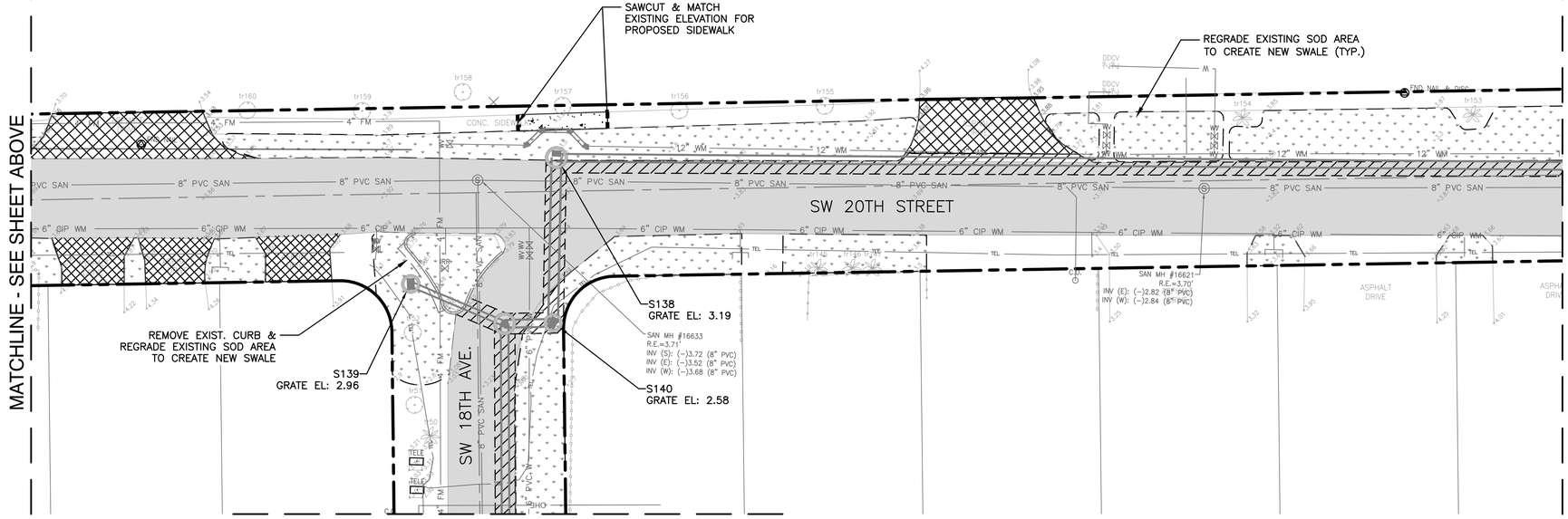
4/6/2021

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-15
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42





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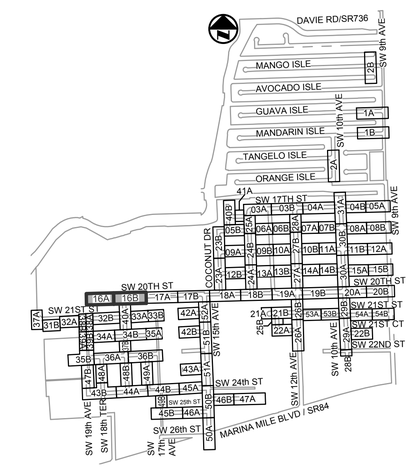

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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	AJS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-16
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42

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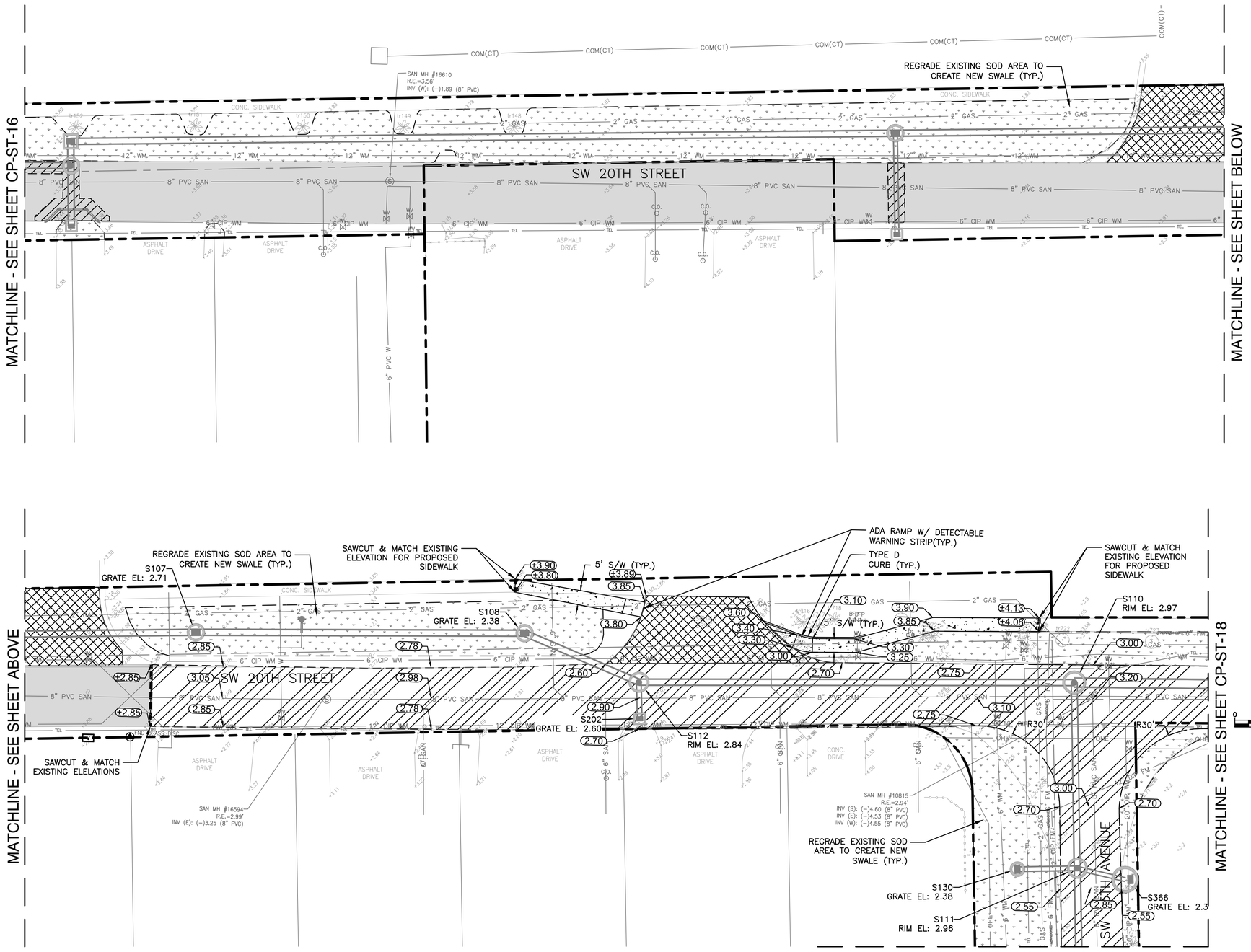

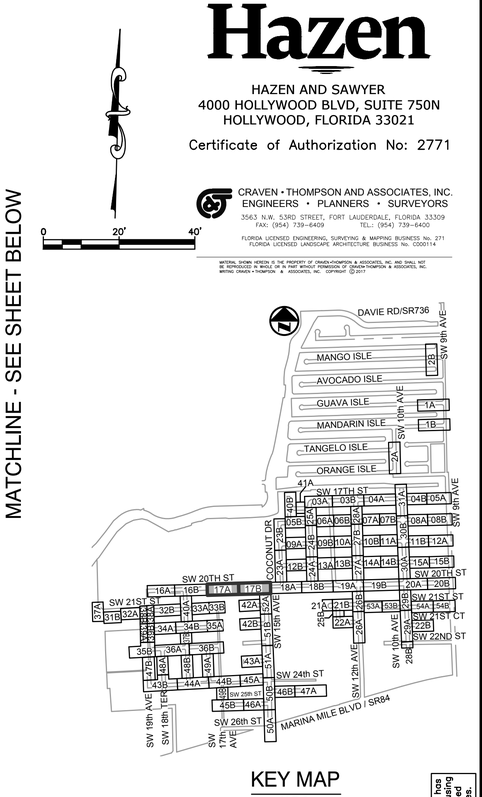

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DRAWN BY:	DATE:	DESIGNED BY:	SCALE:	CHECKED BY:	FIELD BOOK:
XXX	01/07/2019	XXX	1"=20'	XXX	XXXX

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REVISIONS

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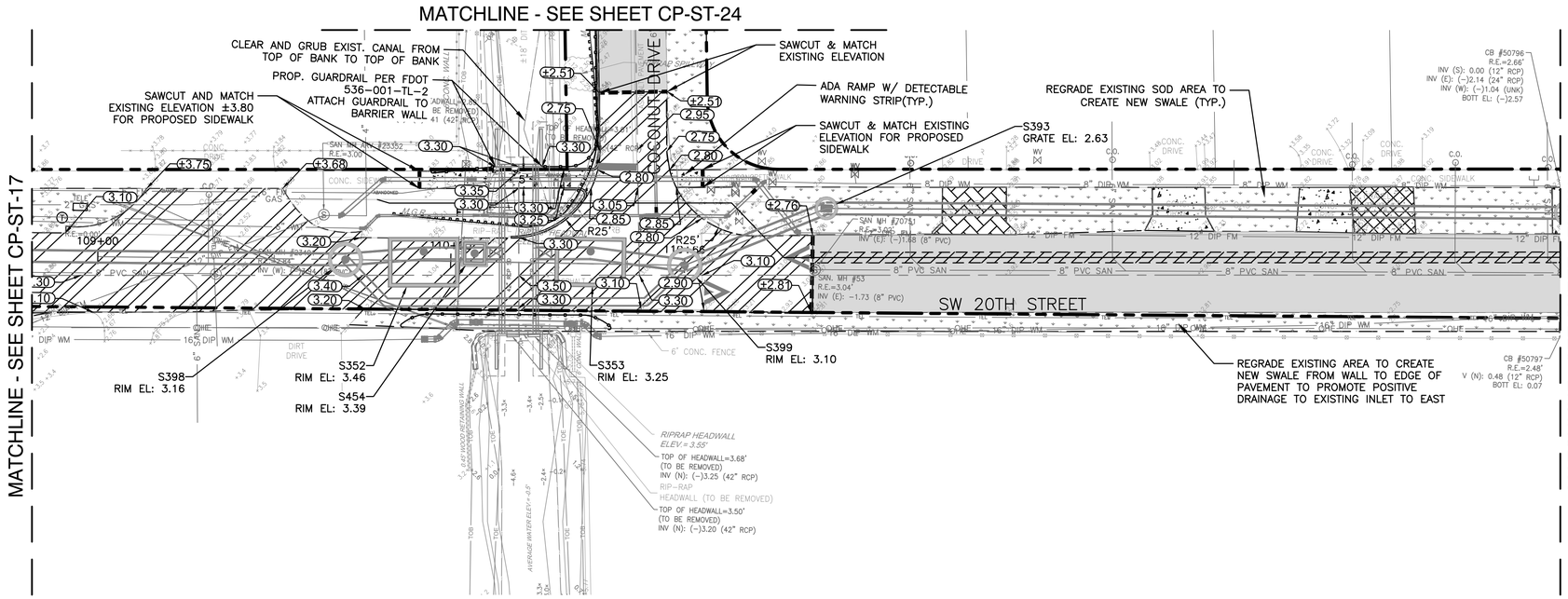
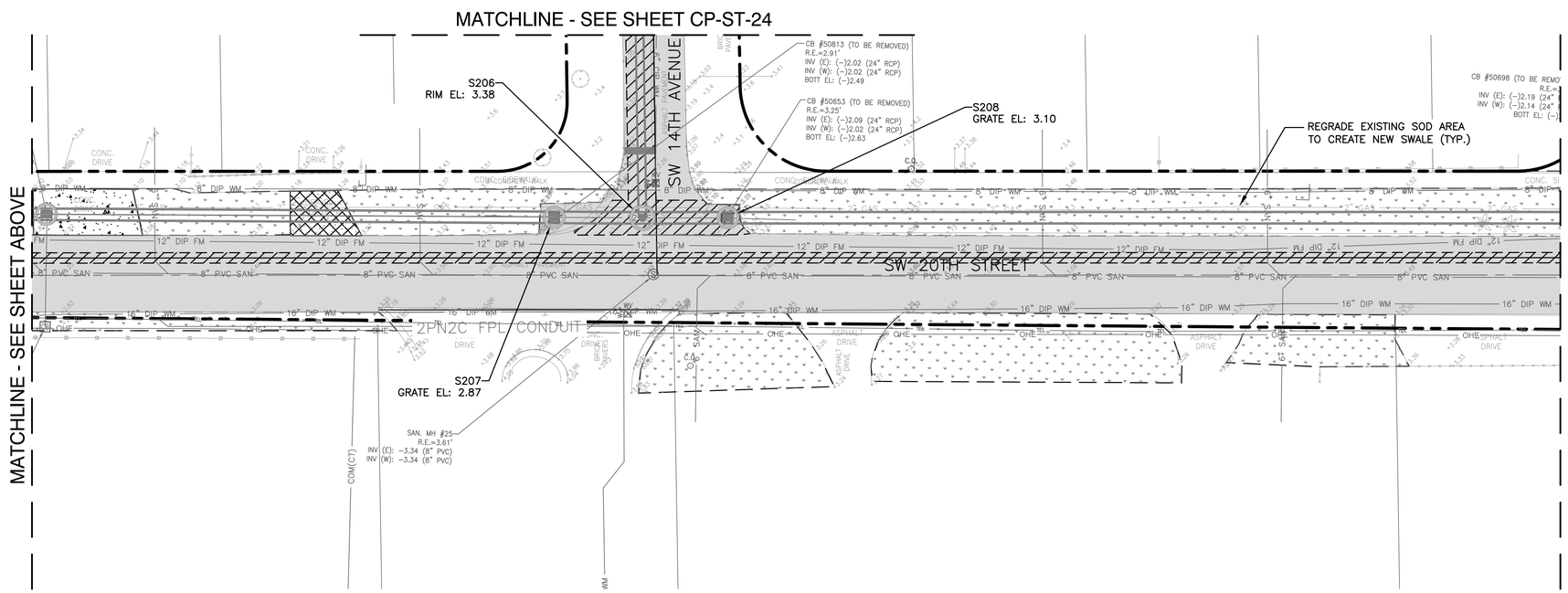
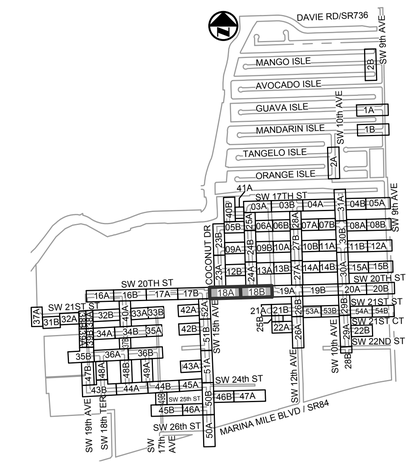
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-17
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42







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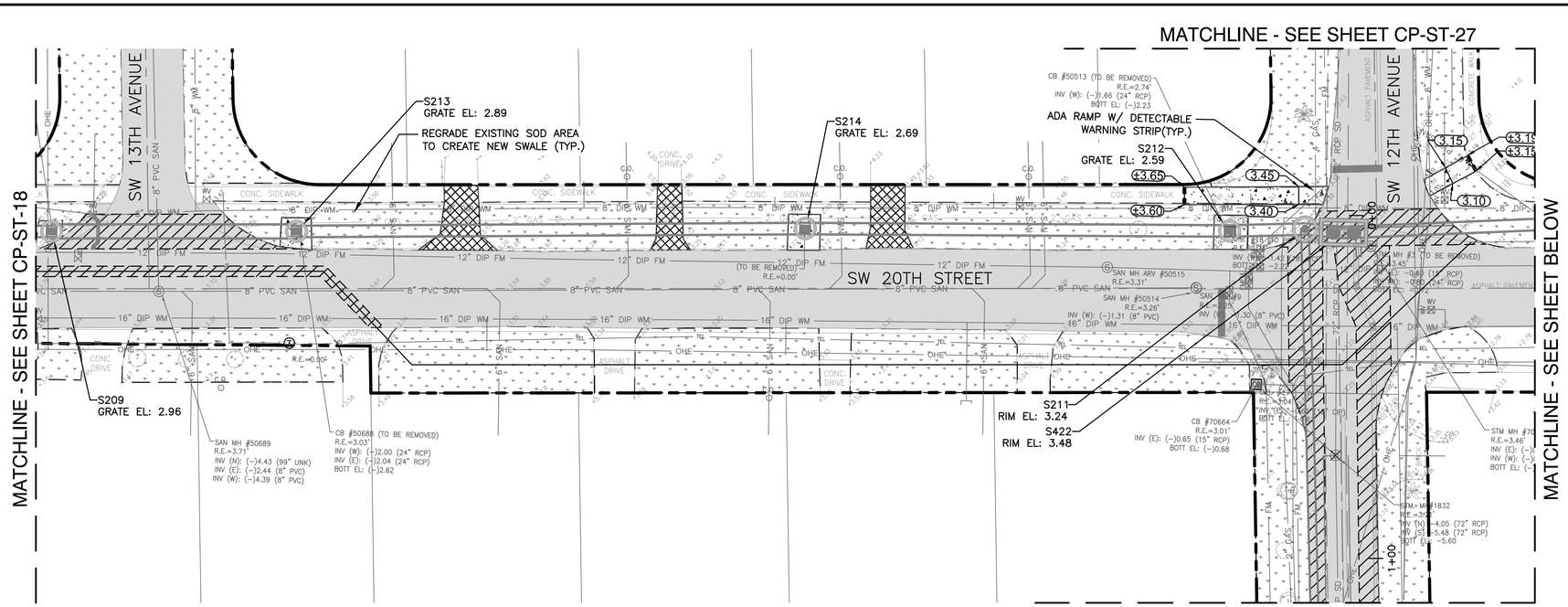
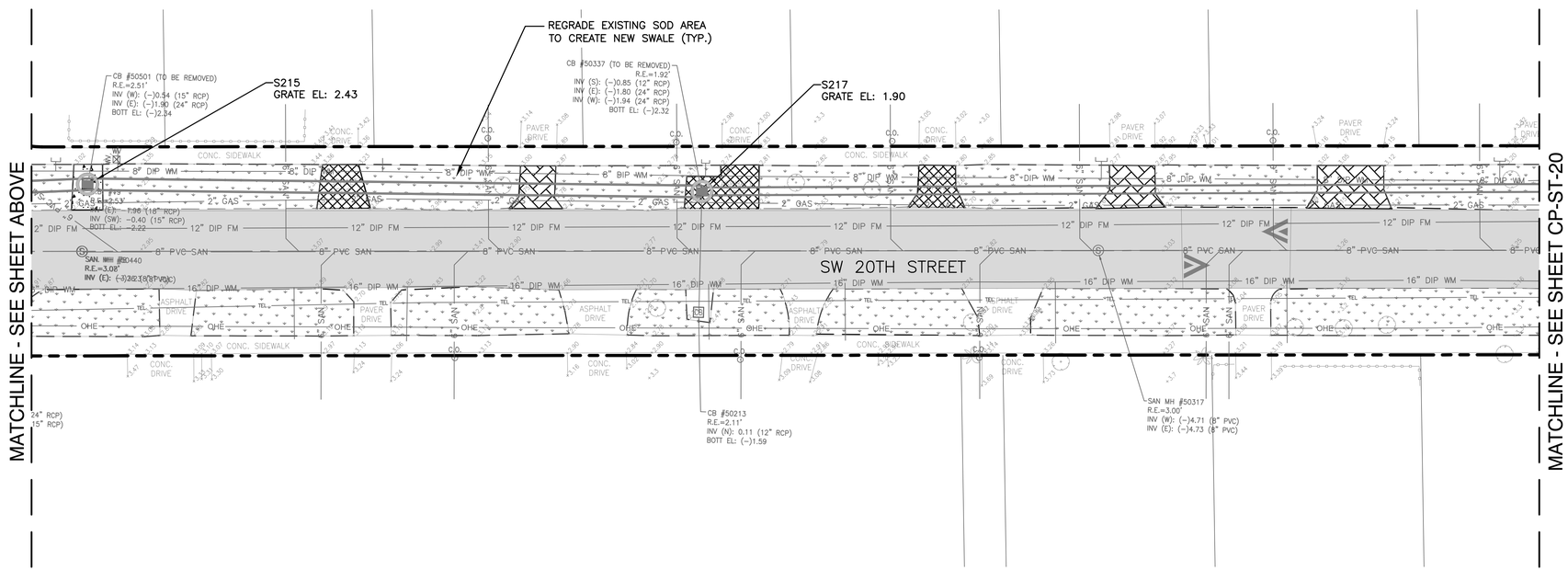
SHEET NO.
CP-ST-18
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42



NOTE:
1. SW 13TH AVENUE SHALL BE MILLED AND RESURFACED FROM SW 20TH STREET NORTH TO SW 17TH STREET.
2. CONTRACTOR SHALL PROVIDE SWALES IN ACCORDANCE WITH SWALE DETAILS ALONG BOTH SIDES OF SW 13TH AVENUE FROM SW 20TH STREET NORTH TO SW 17TH STREET.



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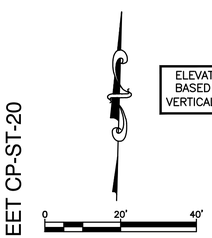

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4/6/2021

ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY:	DATE:
XXX	01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

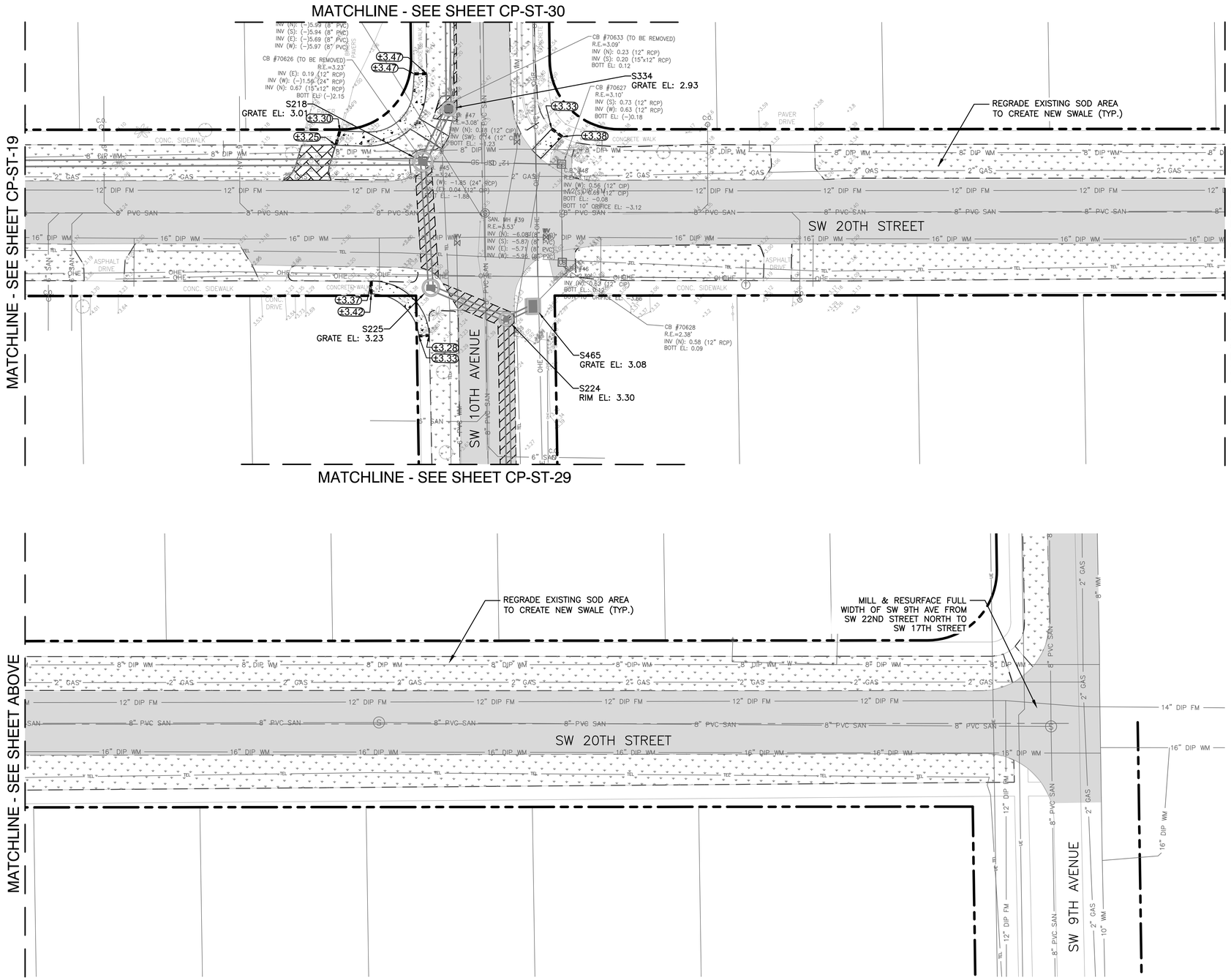
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-19
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42



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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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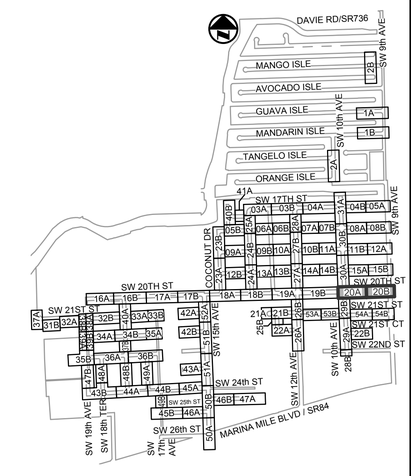

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STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

BID SET

SHEET NO.
CP-ST-20
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42

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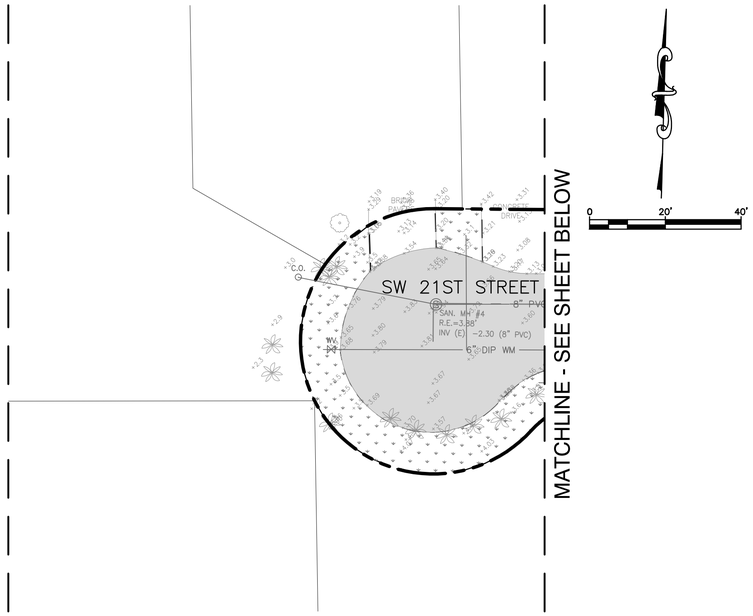
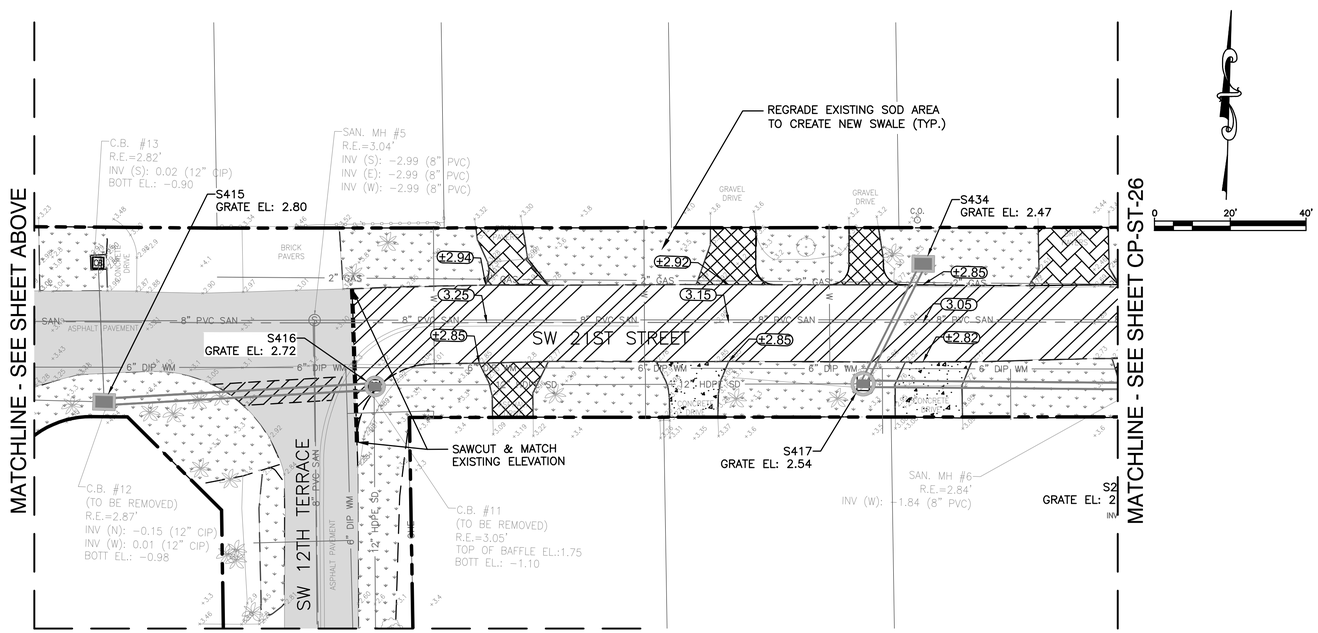


NOTE:
1. SW 21ST STREET FROM FROM SW 12TH AVENUE TO 9TH AVENUE SHALL BE MILLED AND RESURFACED.
2. CONTRACTOR SHALL PROVIDE SWALES IN ACCORDANCE WITH SWALE DETAILS ALONG BOTH SIDES OF SW 21ST STREET.



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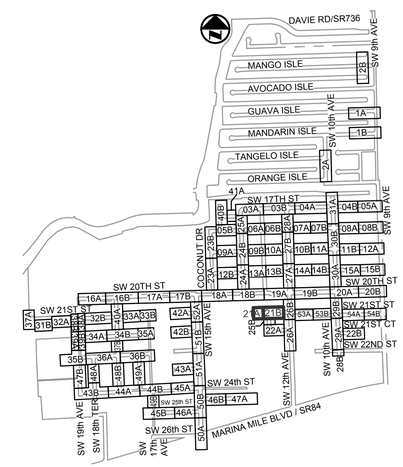

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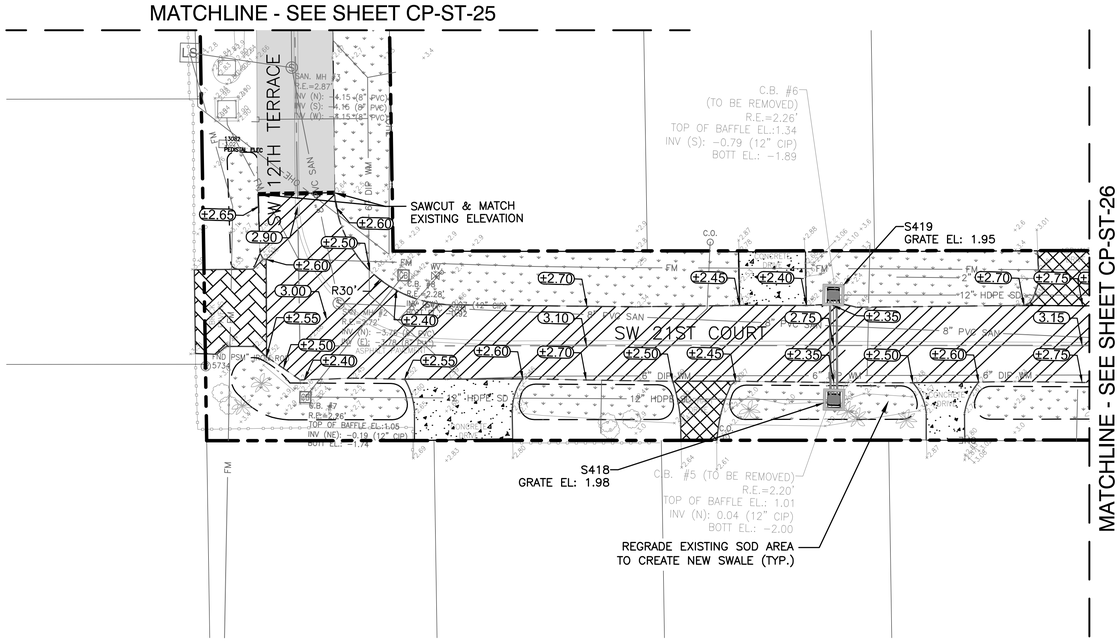

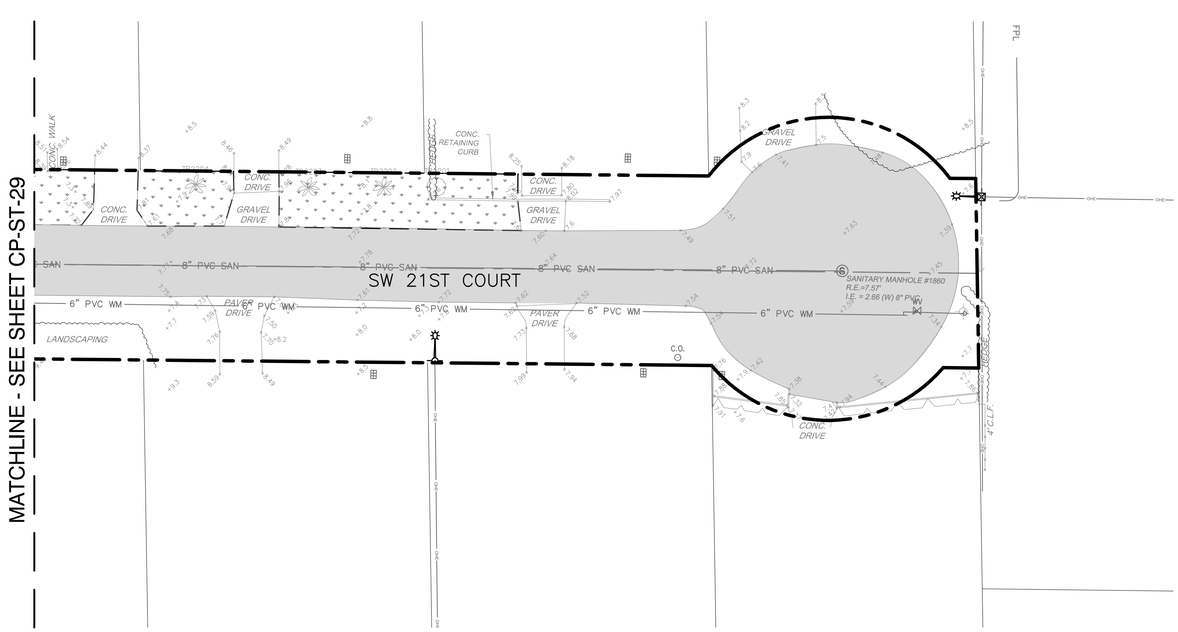

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6/16/2021 10:31 AM
PLOT DATE: 4/6/2021 11:50 AM BY: MRODRIGUEZ
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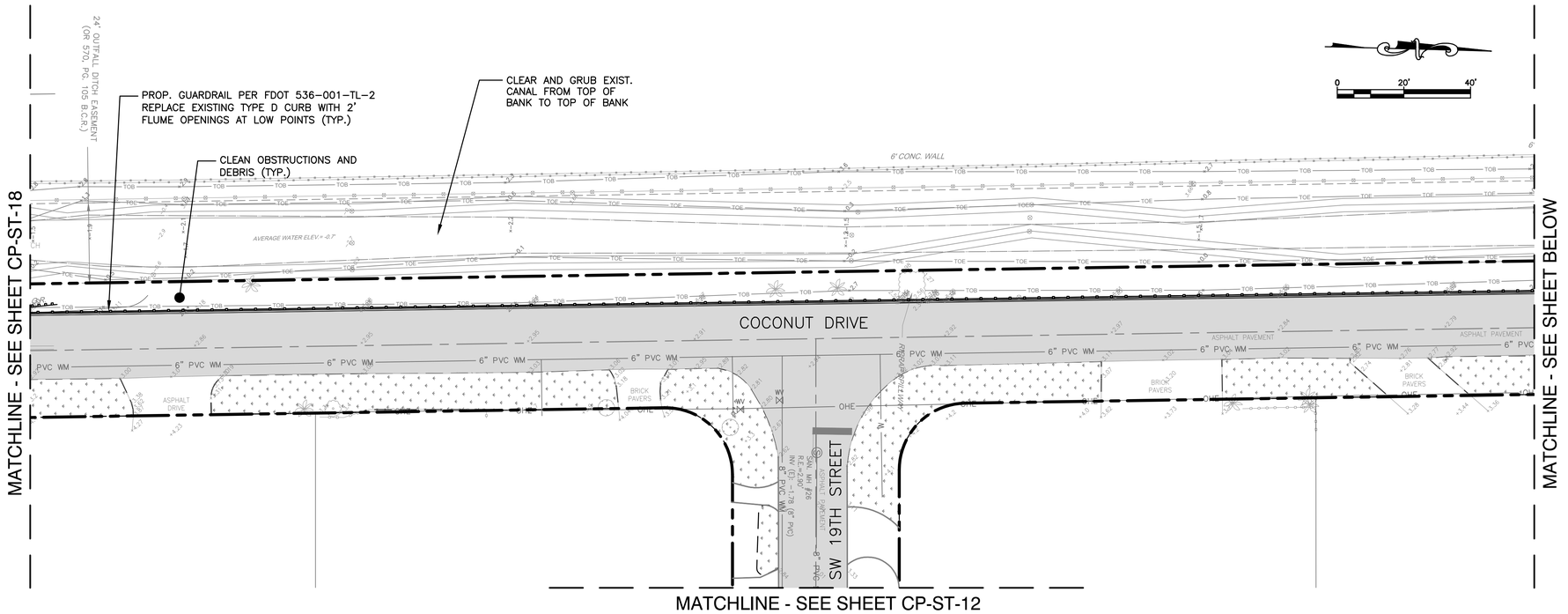

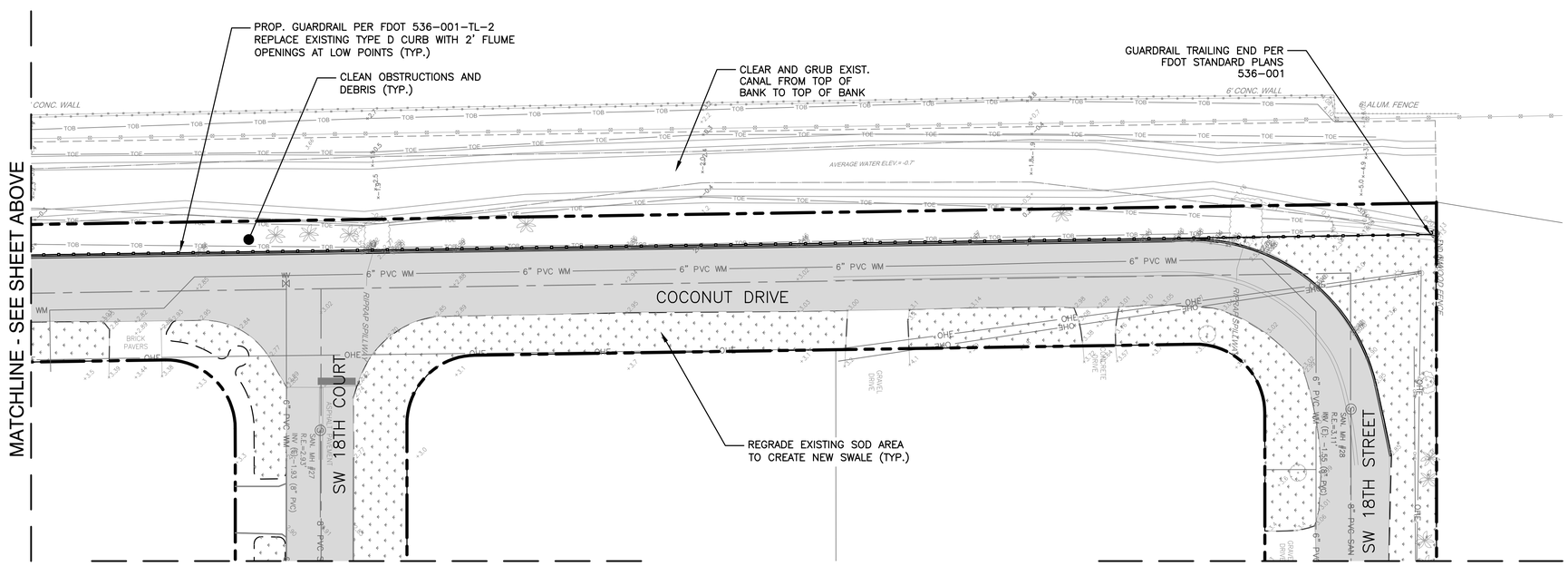

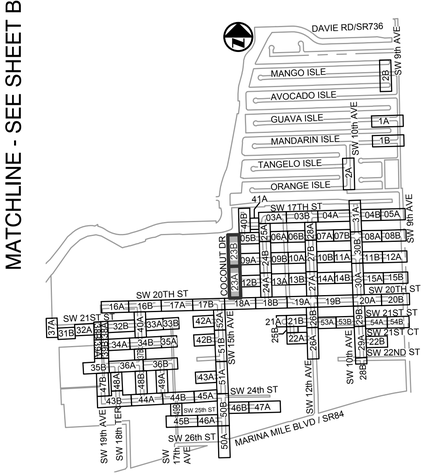

KEY MAP

N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIS PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

BID SET

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
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ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428 This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.
4/6/2021

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-23
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42

PLOT DATE: 4/6/2021 11:52 AM BY: MRODRIGUEZ
XREFs= \11868SURV, \11868topo,R:\Engineering\2016\16-0042-001-01 Fort Lauderdale Stormwater Master Plan\Drawings\11868\11868XREFNOTES,R:\Engineering\2016\16-0042-001-01 Fort Lauderdale Stormwater Master Plan\Drawings\11868\11868XREFUTIL,\11868TOPO,R:\Engineering\2016\16-0042-001-01 Fort Lauderdale Stormwater Master Plan\Drawings\11868\11868XREFCURB,\11868XREFCURB-APSOFT,\11868XREFCURB-PROF-A,\11868XREFCURB-PROF-B,\11868XREFCURB-PROF-C,\11868XREFCURB-PROF-D,\11868XREFCURB-PROF-E,\11868XREFCURB-PROF-F,\11868XREFCURB-PROF-G,\11868XREFCURB-PROF-H,\11868XREFCURB-PROF-I,\11868XREFCURB-PROF-J,\11868XREFCURB-PROF-K,\11868XREFCURB-PROF-L,\11868XREFCURB-PROF-M,\11868XREFCURB-PROF-N,\11868XREFCURB-PROF-O,\11868XREFCURB-PROF-P,\11868XREFCURB-PROF-Q,\11868XREFCURB-PROF-R,\11868XREFCURB-PROF-S,\11868XREFCURB-PROF-T,\11868XREFCURB-PROF-U,\11868XREFCURB-PROF-V,\11868XREFCURB-PROF-W,\11868XREFCURB-PROF-X,\11868XREFCURB-PROF-Y,\11868XREFCURB-PROF-Z,\11868XREFCURB-PROF-AA,\11868XREFCURB-PROF-AB,\11868XREFCURB-PROF-AC,\11868XREFCURB-PROF-AD,\11868XREFCURB-PROF-AE,\11868XREFCURB-PROF-AF,\11868XREFCURB-PROF-AG,\11868XREFCURB-PROF-AH,\11868XREFCURB-PROF-AI,\11868XREFCURB-PROF-AJ,\11868XREFCURB-PROF-AK,\11868XREFCURB-PROF-AL,\11868XREFCURB-PROF-AM,\11868XREFCURB-PROF-AN,\11868XREFCURB-PROF-AO,\11868XREFCURB-PROF-AP,\11868XREFCURB-PROF-AQ,\11868XREFCURB-PROF-AR,\11868XREFCURB-PROF-AS,\11868XREFCURB-PROF-AT,\11868XREFCURB-PROF-AU,\11868XREFCURB-PROF-AV,\11868XREFCURB-PROF-AW,\11868XREFCURB-PROF-AX,\11868XREFCURB-PROF-AY,\11868XREFCURB-PROF-AZ,\11868XREFCURB-PROF-BA,\11868XREFCURB-PROF-BB,\11868XREFCURB-PROF-BC,\11868XREFCURB-PROF-BD,\11868XREFCURB-PROF-BE,\11868XREFCURB-PROF-BF,\11868XREFCURB-PROF-BG,\11868XREFCURB-PROF-BH,\11868XREFCURB-PROF-BI,\11868XREFCURB-PROF-BJ,\11868XREFCURB-PROF-BK,\11868XREFCURB-PROF-BL,\11868XREFCURB-PROF-BM,\11868XREFCURB-PROF-BN,\11868XREFCURB-PROF-BO,\11868XREFCURB-PROF-BP,\11868XREFCURB-PROF-BQ,\11868XREFCURB-PROF-BR,\11868XREFCURB-PROF-BS,\11868XREFCURB-PROF-BT,\11868XREFCURB-PROF-BU,\11868XREFCURB-PROF-BV,\11868XREFCURB-PROF-BW,\11868XREFCURB-PROF-BX,\11868XREFCURB-PROF-BY,\11868XREFCURB-PROF-BZ,\11868XREFCURB-PROF-CA,\11868XREFCURB-PROF-CB,\11868XREFCURB-PROF-CC,\11868XREFCURB-PROF-CD,\11868XREFCURB-PROF-CE,\11868XREFCURB-PROF-CF,\11868XREFCURB-PROF-CG,\11868XREFCURB-PROF-CH,\11868XREFCURB-PROF-CI,\11868XREFCURB-PROF-CJ,\11868XREFCURB-PROF-CK,\11868XREFCURB-PROF-CL,\11868XREFCURB-PROF-CM,\11868XREFCURB-PROF-CN,\11868XREFCURB-PROF-CO,\11868XREFCURB-PROF-CP,\11868XREFCURB-PROF-CQ,\11868XREFCURB-PROF-CR,\11868XREFCURB-PROF-CS,\11868XREFCURB-PROF-CT,\11868XREFCURB-PROF-CU,\11868XREFCURB-PROF-CV,\11868XREFCURB-PROF-CW,\11868XREFCURB-PROF-CX,\11868XREFCURB-PROF-CY,\11868XREFCURB-PROF-CZ,\11868XREFCURB-PROF-DA,\11868XREFCURB-PROF-DB,\11868XREFCURB-PROF-DC,\11868XREFCURB-PROF-DD,\11868XREFCURB-PROF-DE,\11868XREFCURB-PROF-DF,\11868XREFCURB-PROF-DG,\11868XREFCURB-PROF-DH,\11868XREFCURB-PROF-DI,\11868XREFCURB-PROF-DJ,\11868XREFCURB-PROF-DK,\11868XREFCURB-PROF-DL,\11868XREFCURB-PROF-DM,\11868XREFCURB-PROF-DN,\11868XREFCURB-PROF-DO,\11868XREFCURB-PROF-DP,\11868XREFCURB-PROF-DQ,\11868XREFCURB-PROF-DR,\11868XREFCURB-PROF-DS,\11868XREFCURB-PROF-DT,\11868XREFCURB-PROF-DU,\11868XREFCURB-PROF-DV,\11868XREFCURB-PROF-DW,\11868XREFCURB-PROF-DX,\11868XREFCURB-PROF-DY,\11868XREFCURB-PROF-DZ,\11868XREFCURB-PROF-EA,\11868XREFCURB-PROF-EB,\11868XREFCURB-PROF-EC,\11868XREFCURB-PROF-ED,\11868XREFCURB-PROF-EE,\11868XREFCURB-PROF-EF,\11868XREFCURB-PROF-EG,\11868XREFCURB-PROF-EH,\11868XREFCURB-PROF-EI,\11868XREFCURB-PROF-EJ,\11868XREFCURB-PROF-EK,\11868XREFCURB-PROF-EL,\11868XREFCURB-PROF-EM,\11868XREFCURB-PROF-EN,\11868XREFCURB-PROF-EO,\11868XREFCURB-PROF-EP,\11868XREFCURB-PROF-EQ,\11868XREFCURB-PROF-ER,\11868XREFCURB-PROF-ES,\11868XREFCURB-PROF-ET,\11868XREFCURB-PROF-EU,\11868XREFCURB-PROF-EV,\11868XREFCURB-PROF-EW,\11868XREFCURB-PROF-EX,\11868XREFCURB-PROF-EY,\11868XREFCURB-PROF-EZ,\11868XREFCURB-PROF-FA,\11868XREFCURB-PROF-FB,\11868XREFCURB-PROF-FC,\11868XREFCURB-PROF-FD,\11868XREFCURB-PROF-FE,\11868XREFCURB-PROF-FF,\11868XREFCURB-PROF-FG,\11868XREFCURB-PROF-FH,\11868XREFCURB-PROF-FI,\11868XREFCURB-PROF-FJ,\11868XREFCURB-PROF-FK,\11868XREFCURB-PROF-FL,\11868XREFCURB-PROF-FM,\11868XREFCURB-PROF-FN,\11868XREFCURB-PROF-FO,\11868XREFCURB-PROF-FP,\11868XREFCURB-PROF-FQ,\11868XREFCURB-PROF-FR,\11868XREFCURB-PROF-FS,\11868XREFCURB-PROF-FT,\11868XREFCURB-PROF-FU,\11868XREFCURB-PROF-FV,\11868XREFCURB-PROF-FW,\11868XREFCURB-PROF-FX,\11868XREFCURB-PROF-FY,\11868XREFCURB-PROF-FZ,\11868XREFCURB-PROF-GA,\11868XREFCURB-PROF-GB,\11868XREFCURB-PROF-GC,\11868XREFCURB-PROF-GD,\11868XREFCURB-PROF-GE,\11868XREFCURB-PROF-GF,\11868XREFCURB-PROF-GG,\11868XREFCURB-PROF-GH,\11868XREFCURB-PROF-GI,\11868XREFCURB-PROF-GJ,\11868XREFCURB-PROF-GK,\11868XREFCURB-PROF-GL,\11868XREFCURB-PROF-GM,\11868XREFCURB-PROF-GN,\11868XREFCURB-PROF-GO,\11868XREFCURB-PROF-GP,\11868XREFCURB-PROF-GQ,\11868XREFCURB-PROF-GR,\11868XREFCURB-PROF-GS,\11868XREFCURB-PROF-GT,\11868XREFCURB-PROF-GU,\11868XREFCURB-PROF-GV,\11868XREFCURB-PROF-GW,\11868XREFCURB-PROF-GX,\11868XREFCURB-PROF-GY,\11868XREFCURB-PROF-GZ,\11868XREFCURB-PROF-HA,\11868XREFCURB-PROF-HB,\11868XREFCURB-PROF-HC,\11868XREFCURB-PROF-HD,\11868XREFCURB-PROF-HE,\11868XREFCURB-PROF-HF,\11868XREFCURB-PROF-HG,\11868XREFCURB-PROF-HH,\1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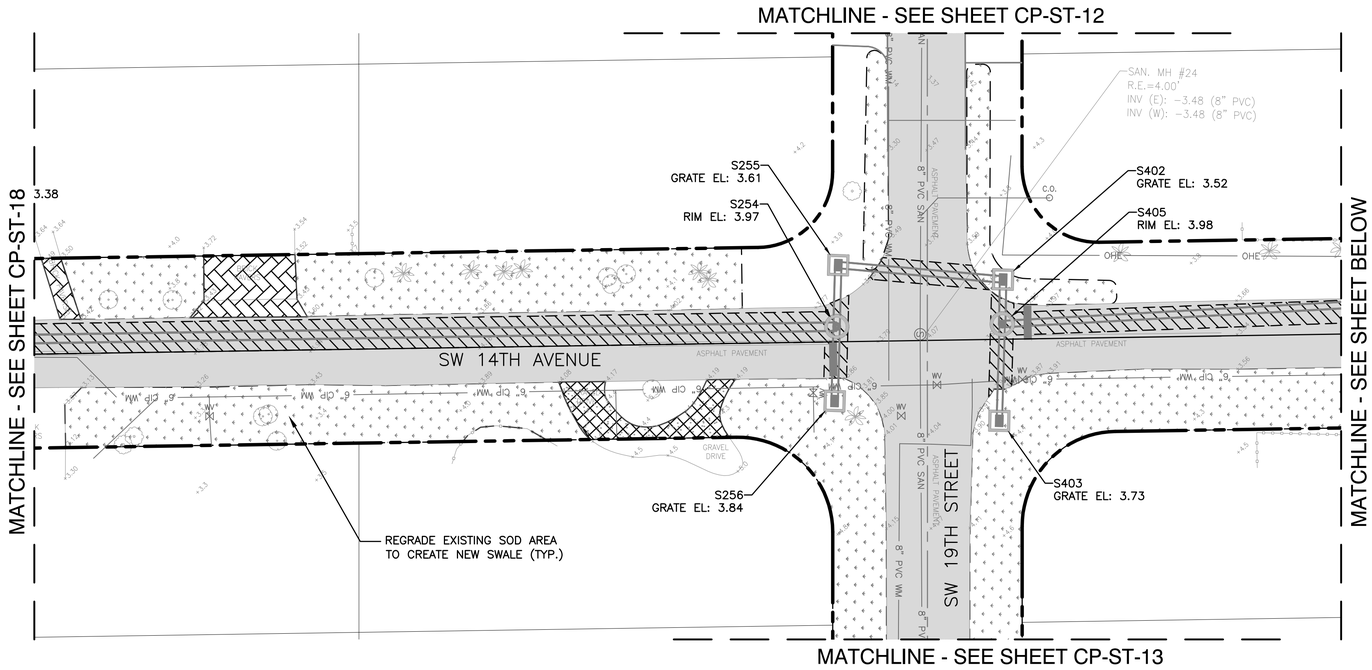

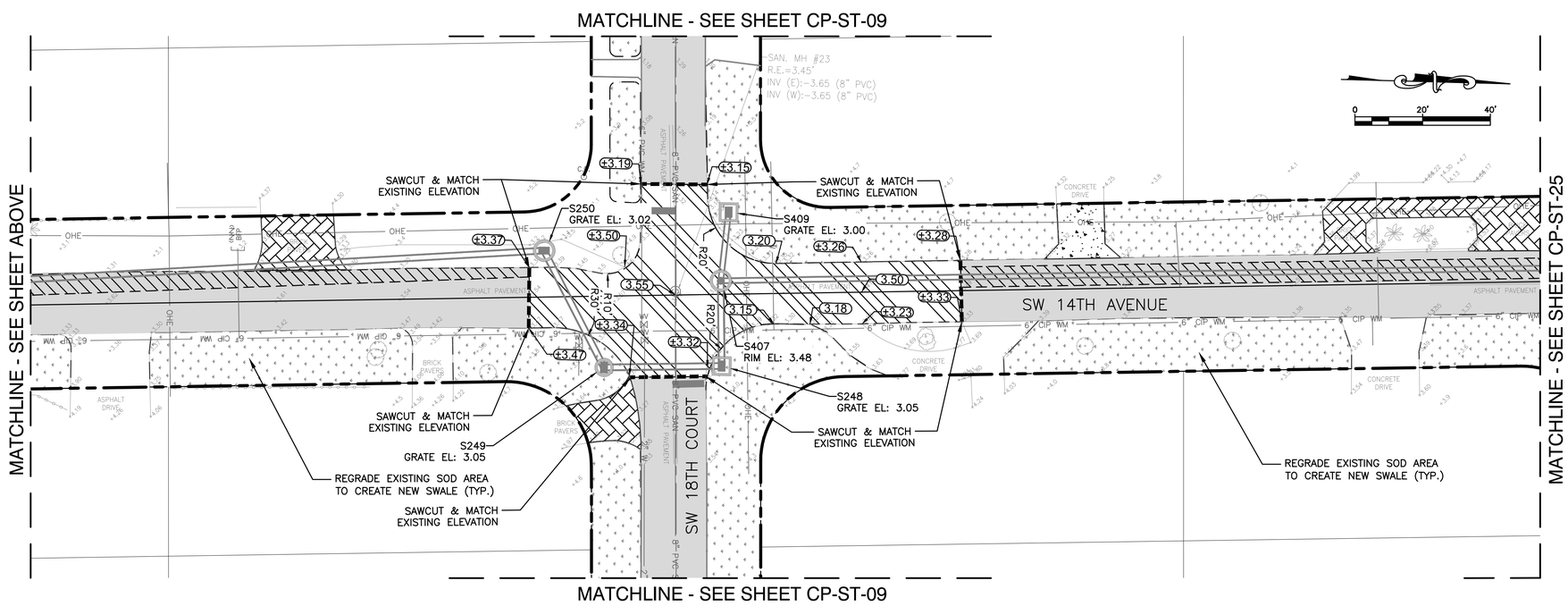

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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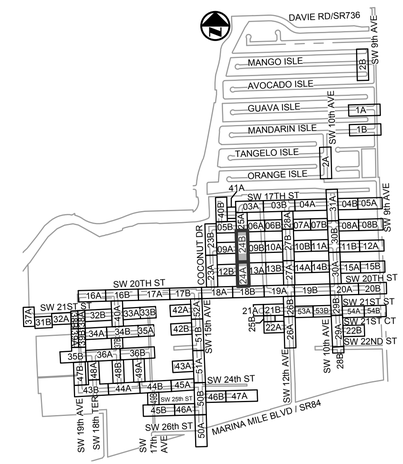

KEY MAP

N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIS PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

BID SET

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428 This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.
4/6/2021

ENGINEER:
PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY:	DATE:
XXX	01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

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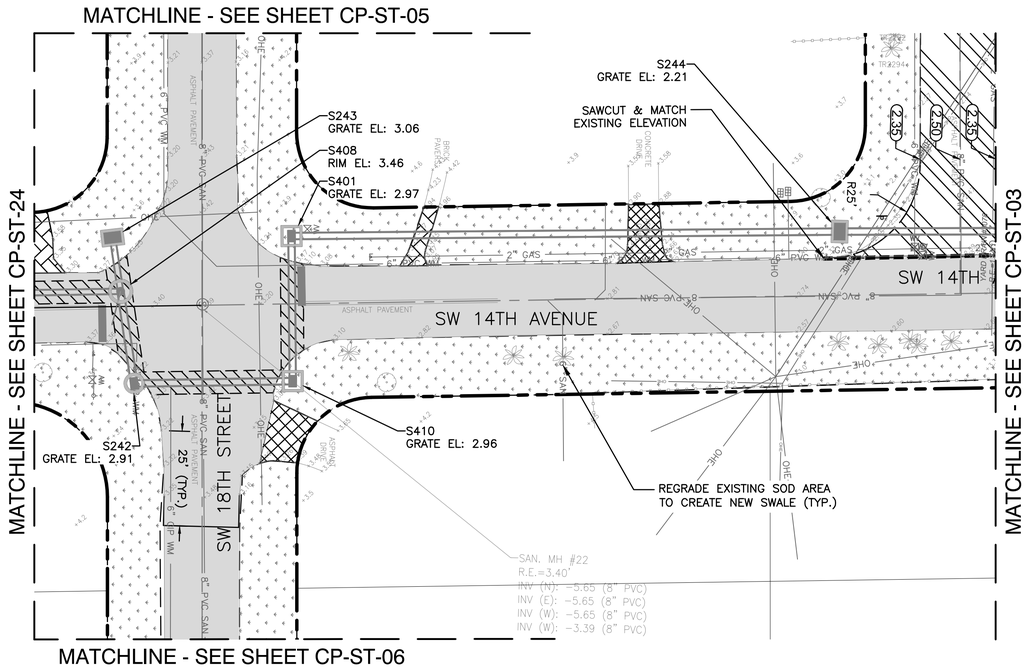

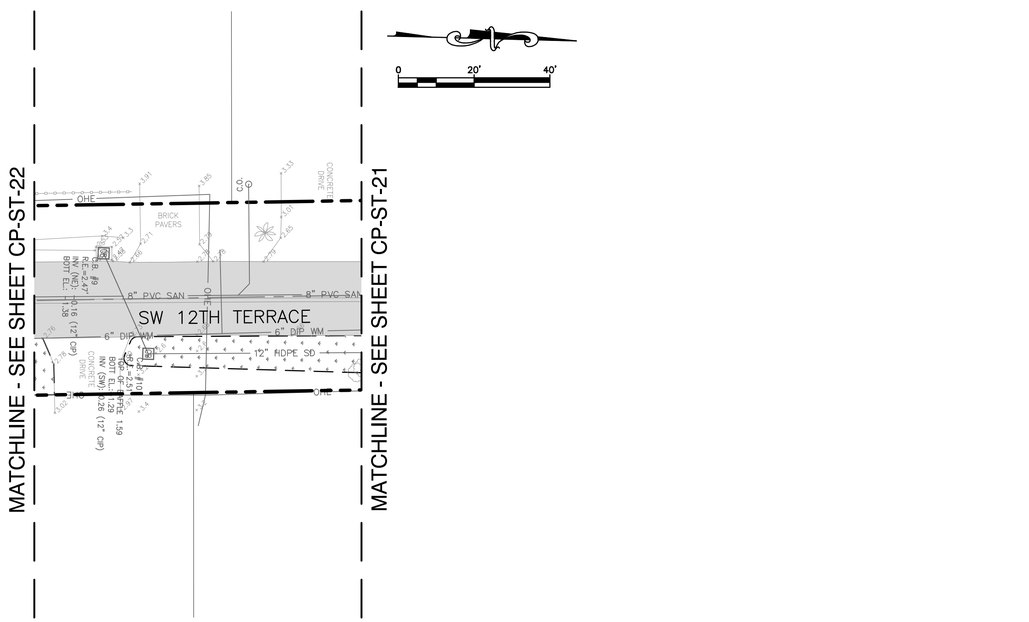

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIS PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

CRAVEN · THOMPSON AND ASSOCIATES, INC.
ENGINEERS · PLANNERS · SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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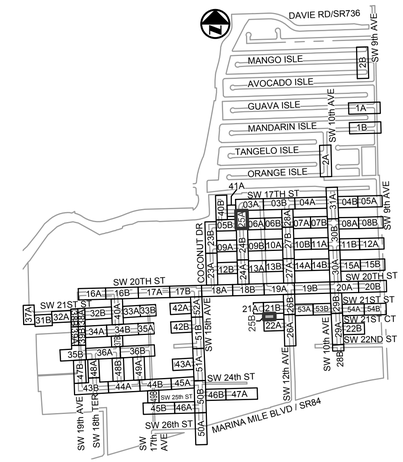

KEY MAP
N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428 This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

4/6/2021

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ENGINEER:
PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY:	DATE:	DESIGNED BY:	SCALE:	CHECKED BY:	FIELD BOOK:
XXX	01/07/2019	XXX	1"=20'	XXX	XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

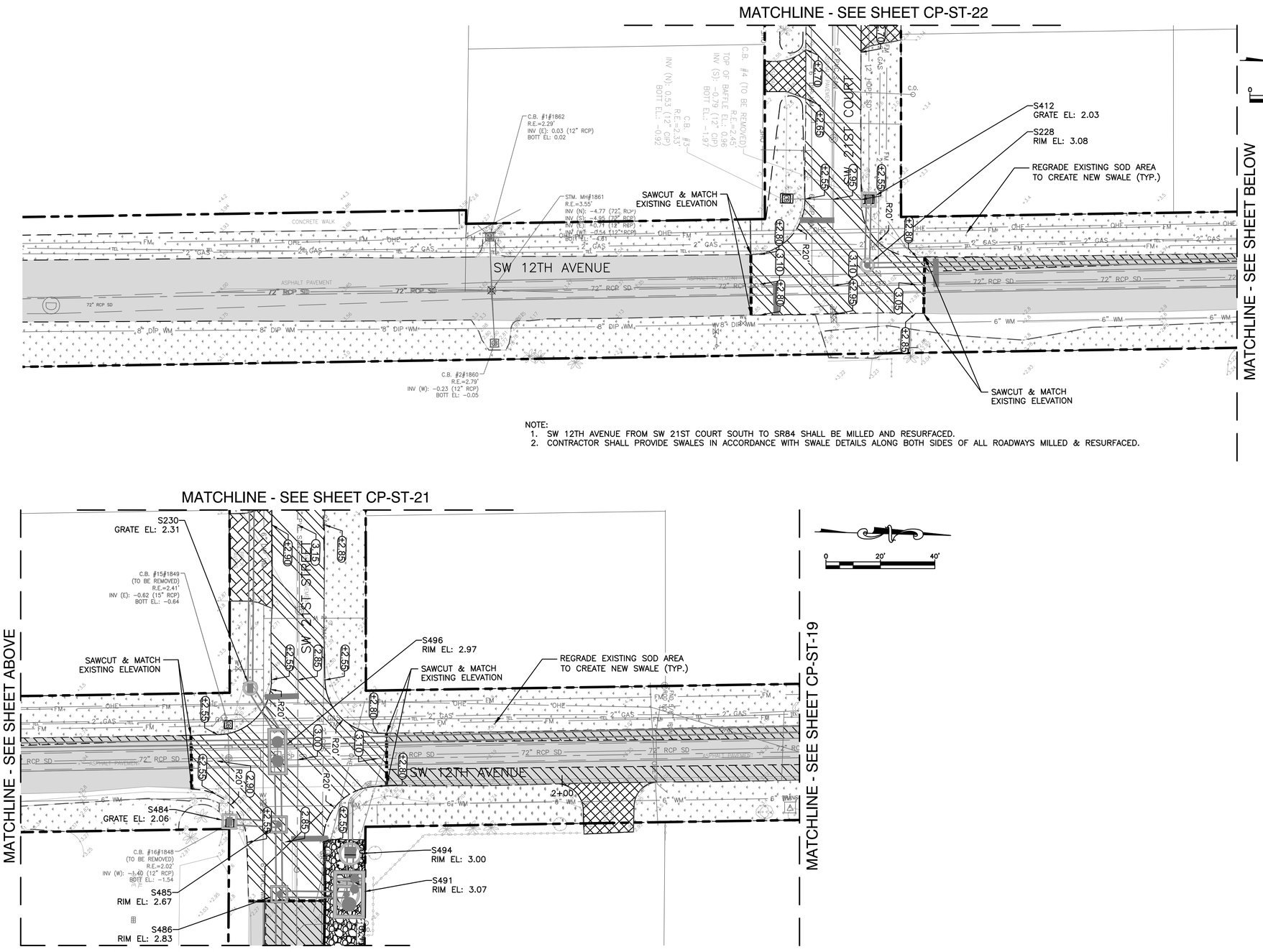
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-25

TOTAL: 254

CAD FILE: 11868-CP-ST-A

DRAWING FILE NO. 4-142-42



NOTE:
1. SW 12TH AVENUE FROM SW 21ST COURT SOUTH TO SR84 SHALL BE MILLED AND RESURFACED.
2. CONTRACTOR SHALL PROVIDE SWALES IN ACCORDANCE WITH SWALE DETAILS ALONG BOTH SIDES OF ALL ROADWAYS MILLED & RESURFACED.

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Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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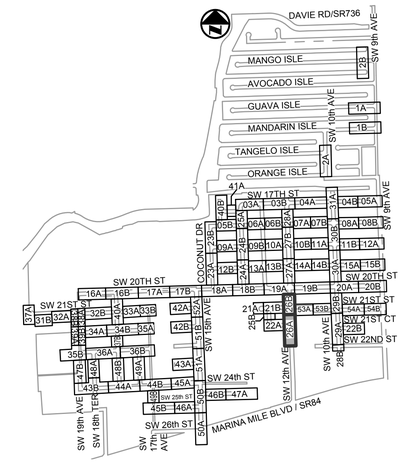

KEY MAP
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4/6/2021

ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

BID SET

SHEET NO.
CP-ST-26
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42

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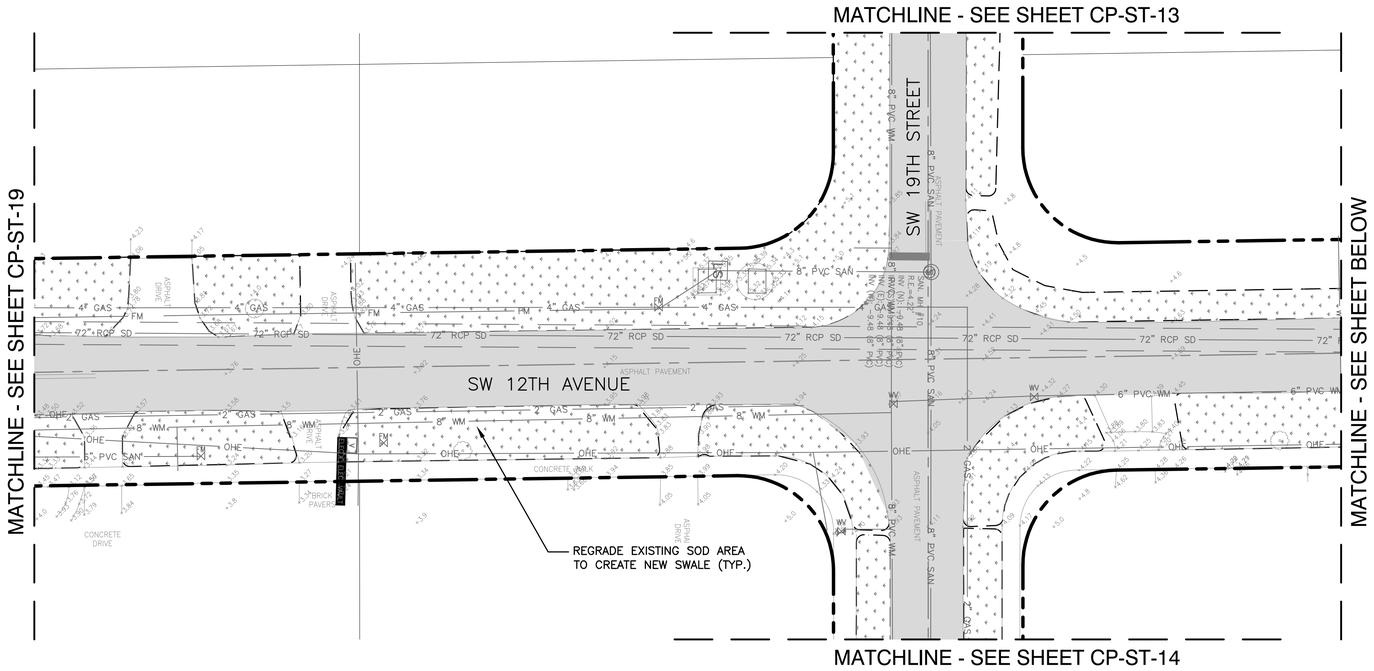
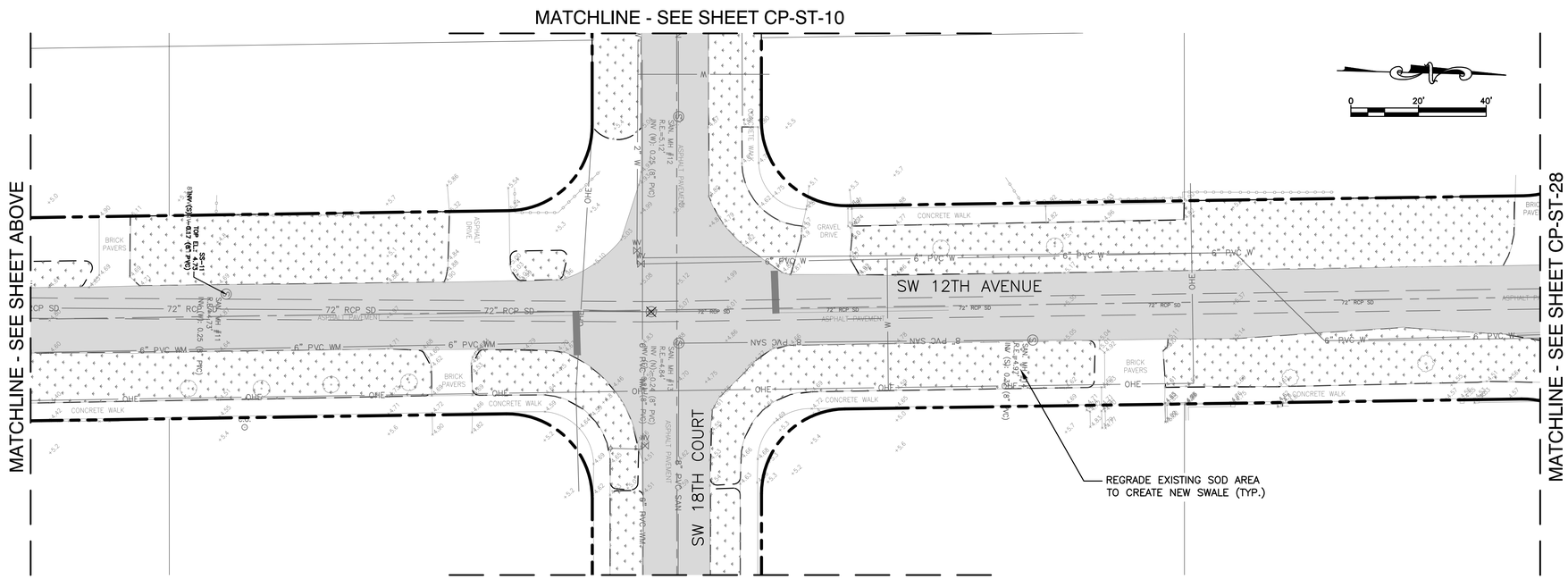
Sunshine811.com





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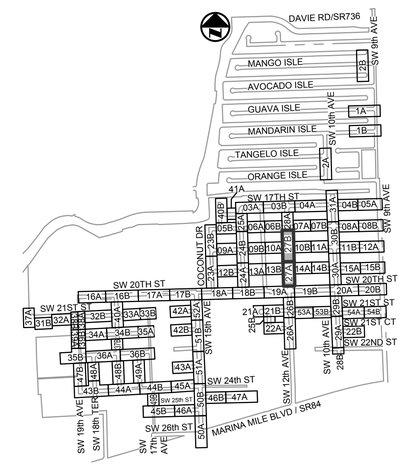

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NO.	DATE	BY	CHK'D	DESCRIPTION
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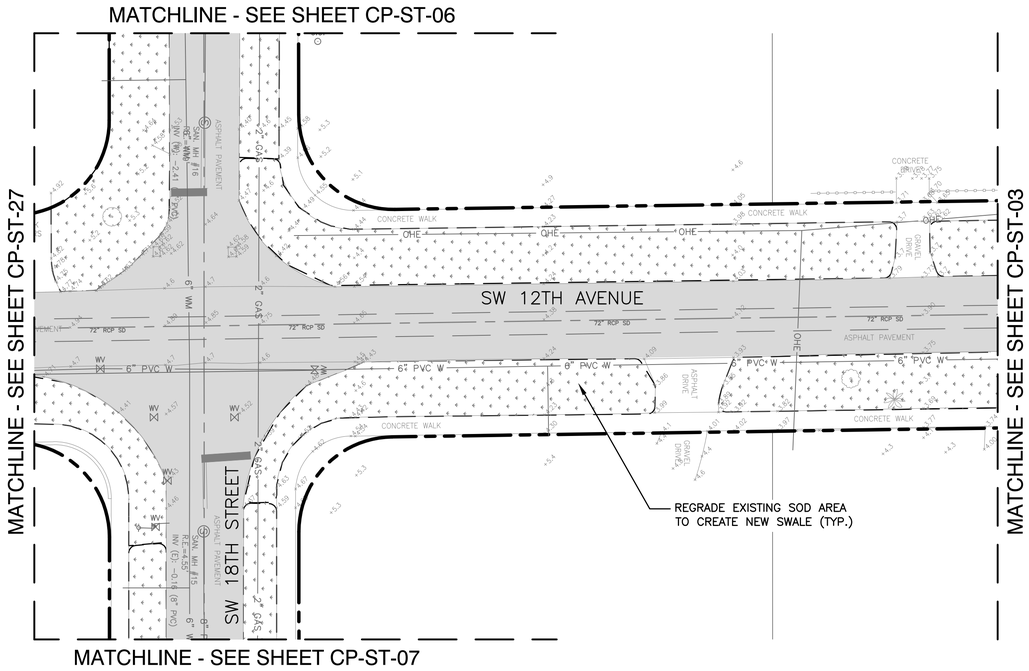
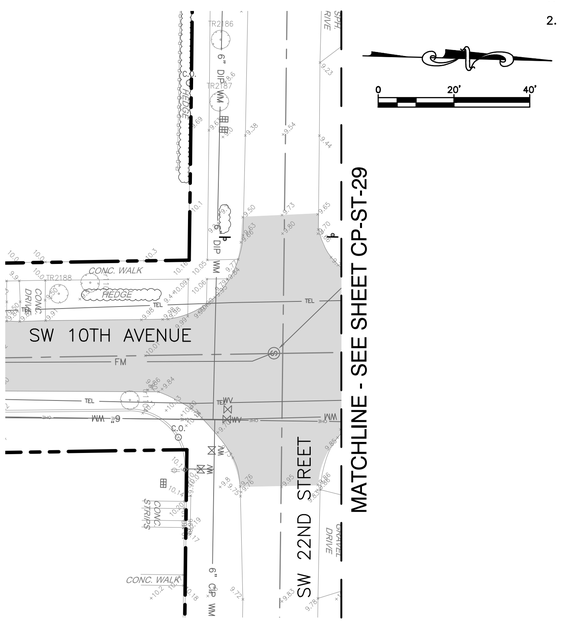
4/6/2021

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-27
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42



NOTE:
1. SW 22ND STREET FROM DEAD END WEST OF SW 10TH AVENUE TO SW 9TH AVENUE SHALL BE MILLED AND RESURFACED.
2. CONTRACTOR SHALL PROVIDE SWALES IN ACCORDANCE WITH SWALE DETAILS ALONG BOTH SIDES OF SW 12TH AVENUE & SW 18TH STREET.



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Certificate of Authorization No: 2771

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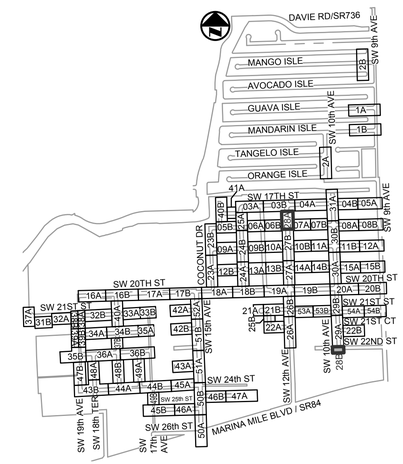

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BID SET

ENGINEER:
PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
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FIELD BOOK: XXXX	

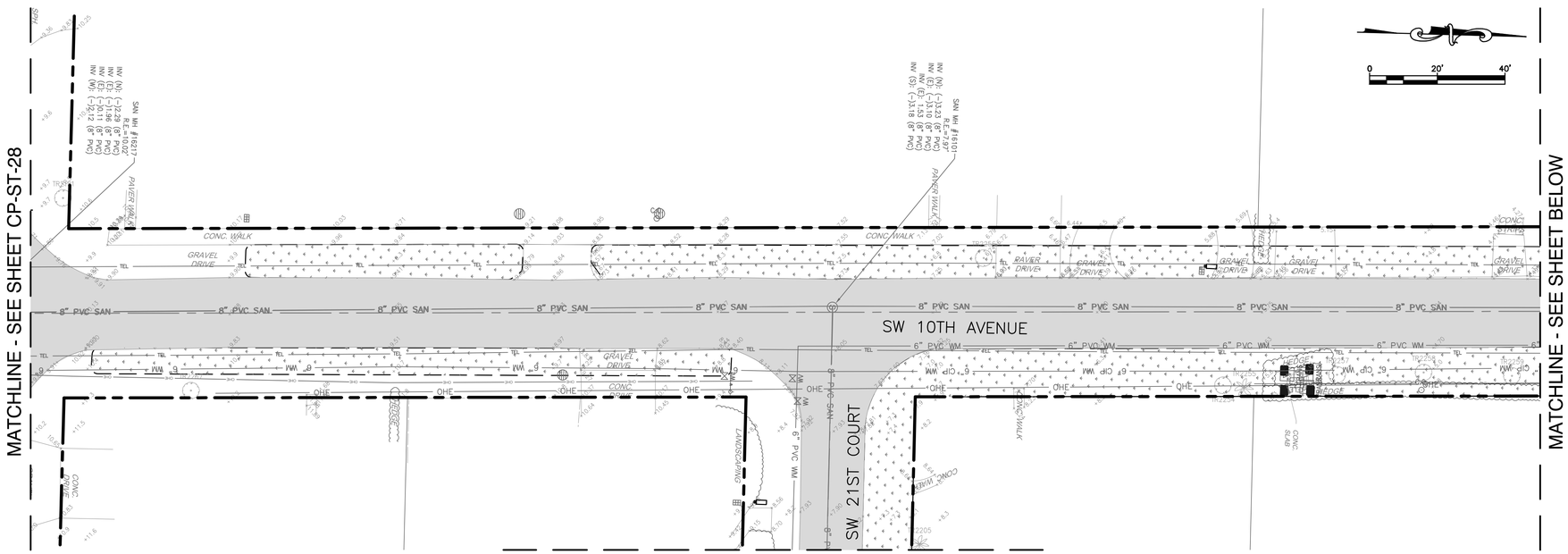
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-28
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42



NOTE:
1. SW 21ST STREET FROM SW 12TH AVENUE TO 9TH AVENUE SHALL BE MILLED AND RESURFACED.
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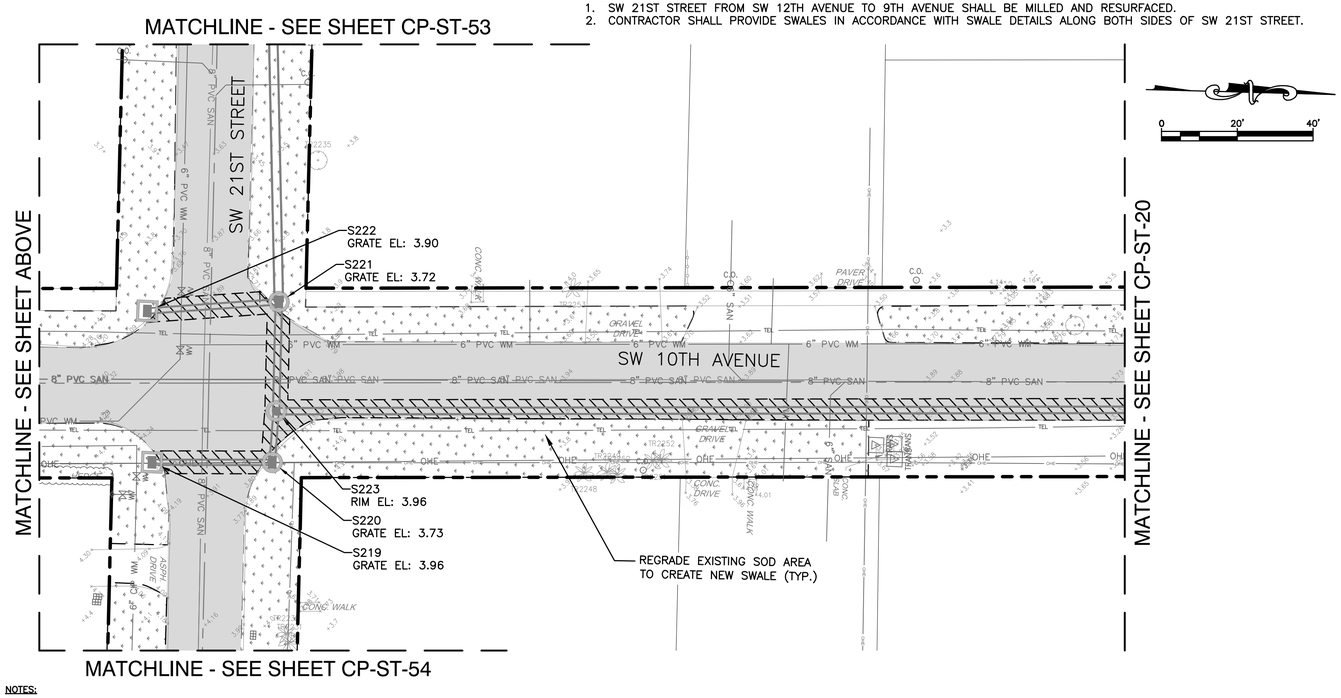

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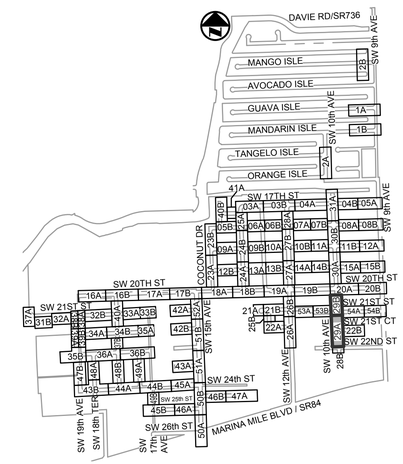

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PAVING & GRADING PLAN

BID SET

SHEET NO.
CP-ST-29
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42

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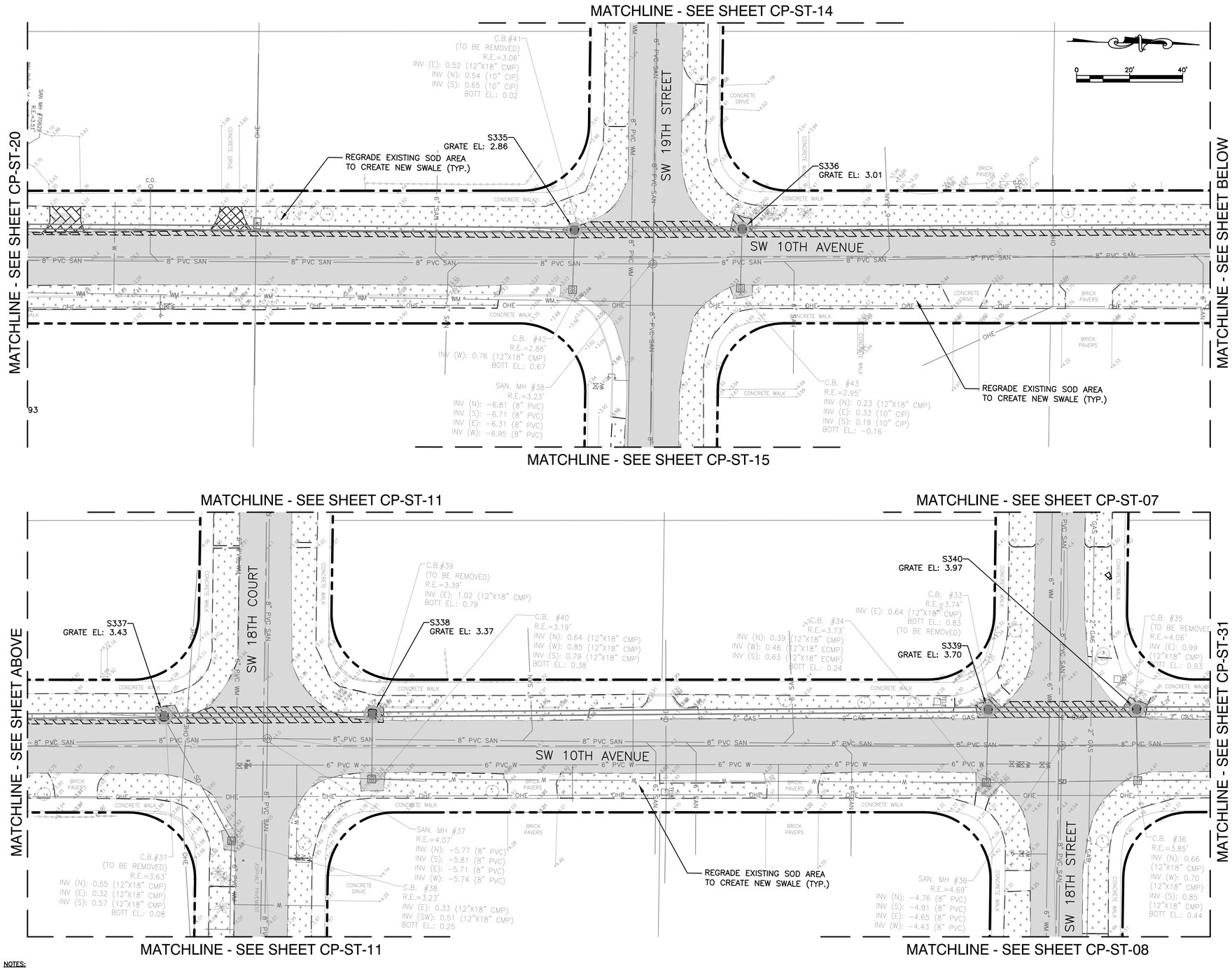

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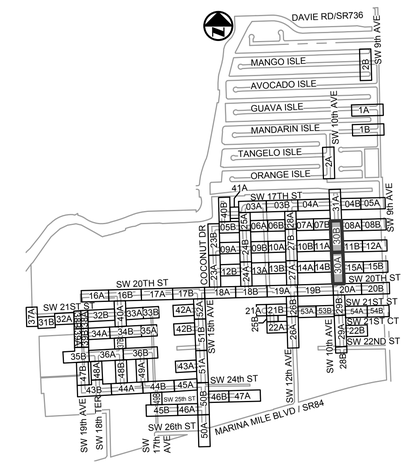


KEY MAP
N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

0 20' 40'

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428 This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.
4/6/2021

ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

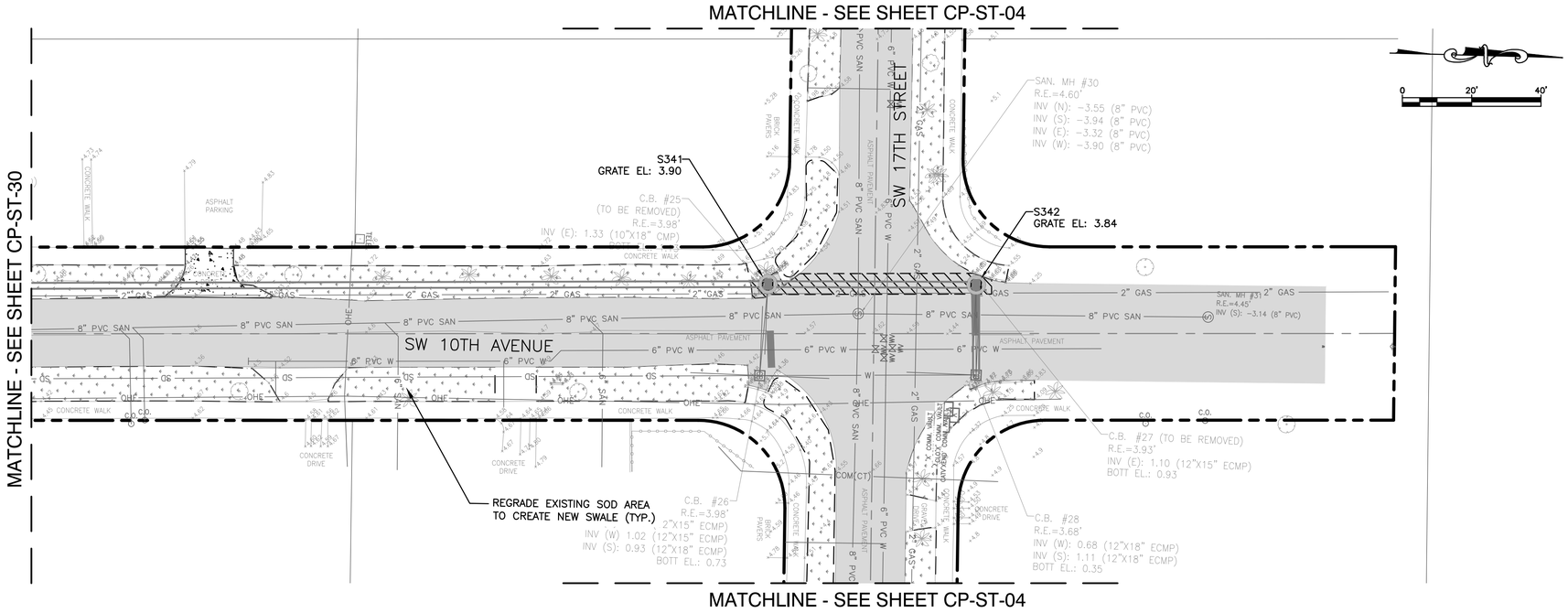
REVISIONS

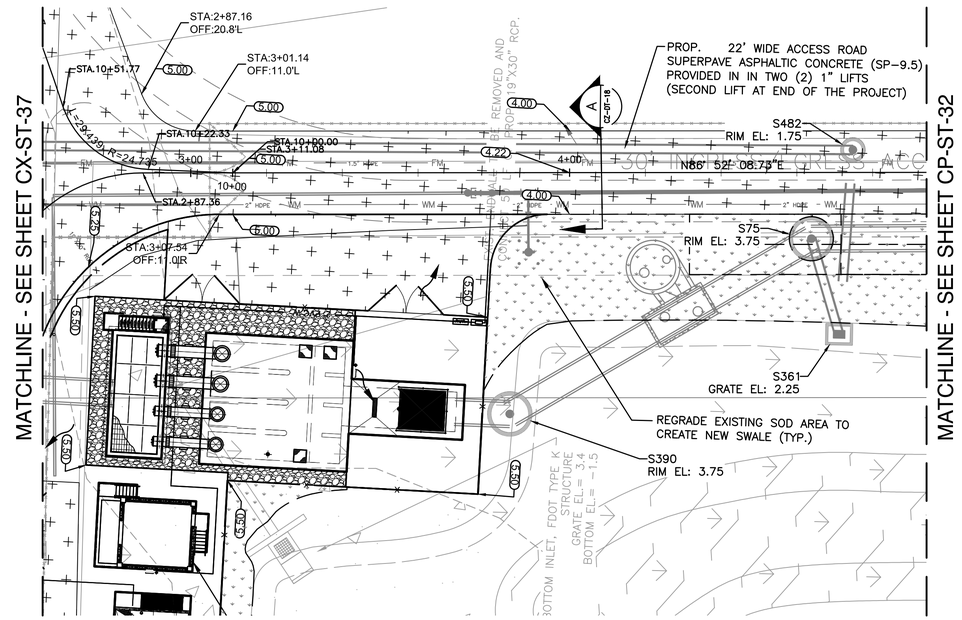
NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

BID SET

SHEET NO.
CP-ST-30
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42





NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIIN PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.

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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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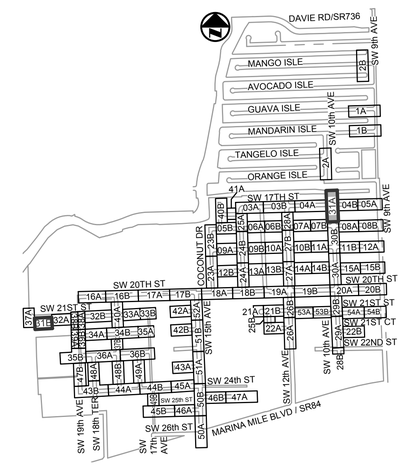

KEY MAP
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FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

BID SET

SHEET NO.
CP-ST-31
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42

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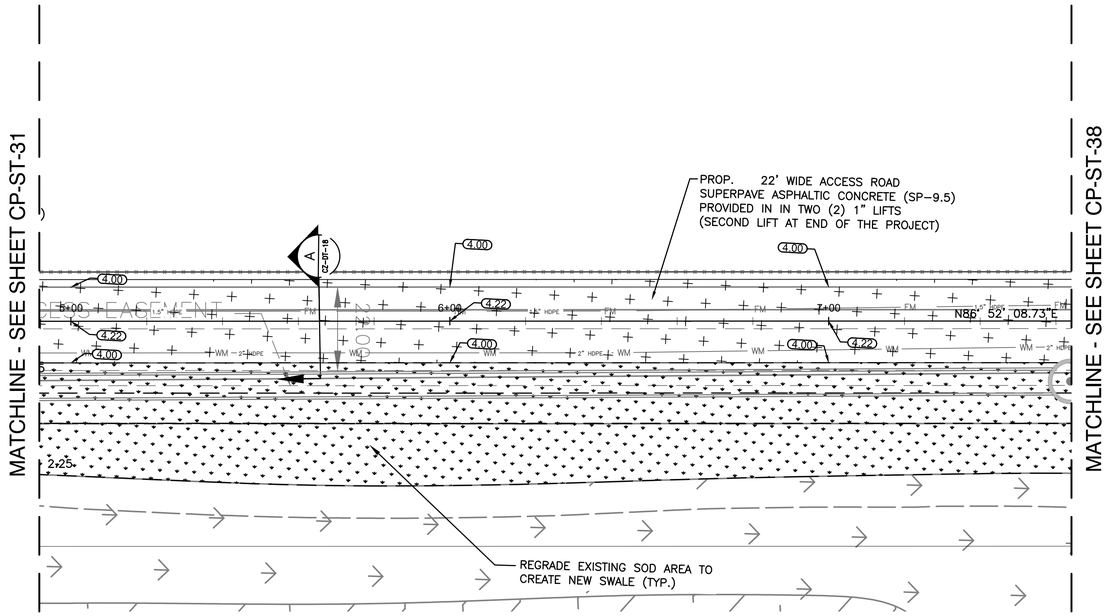

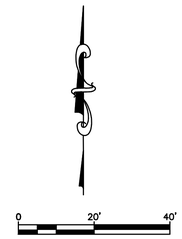

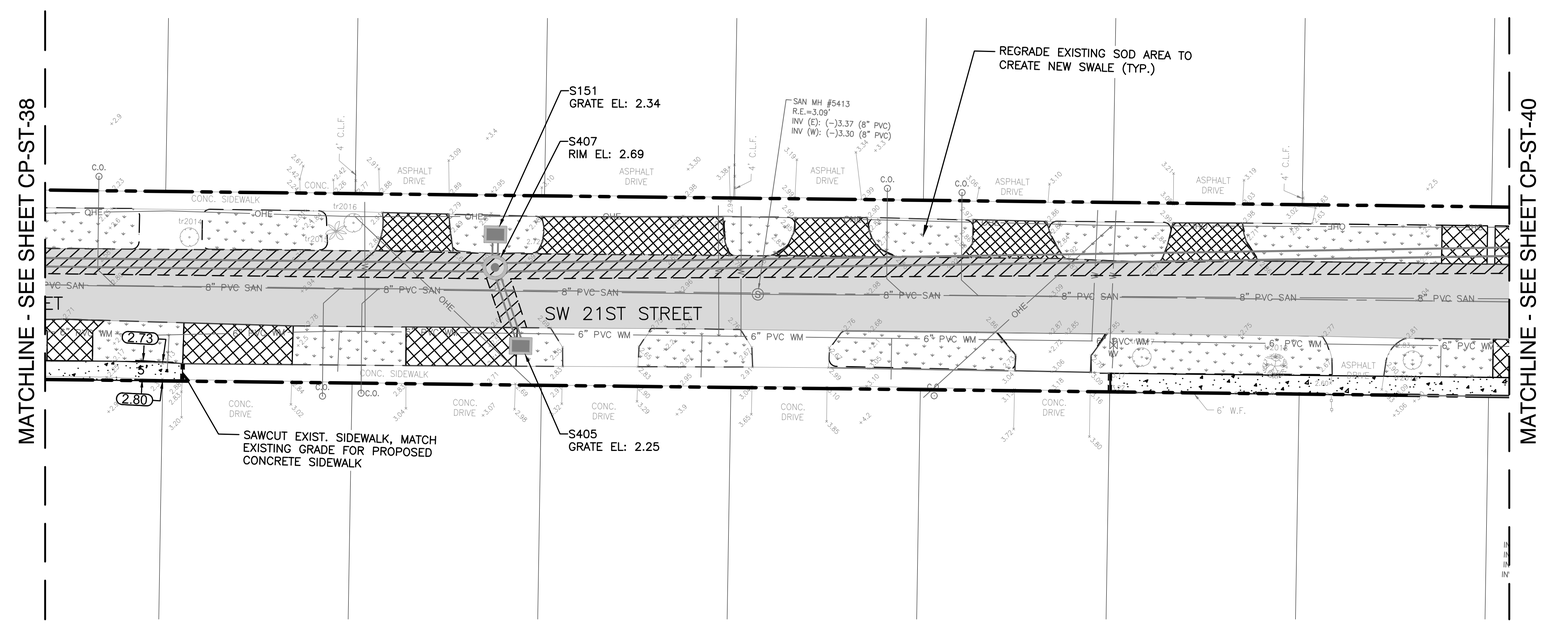

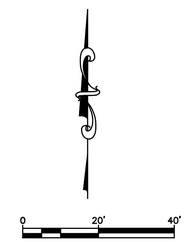

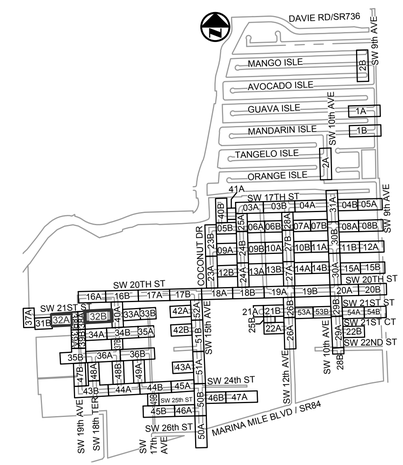

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Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
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DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

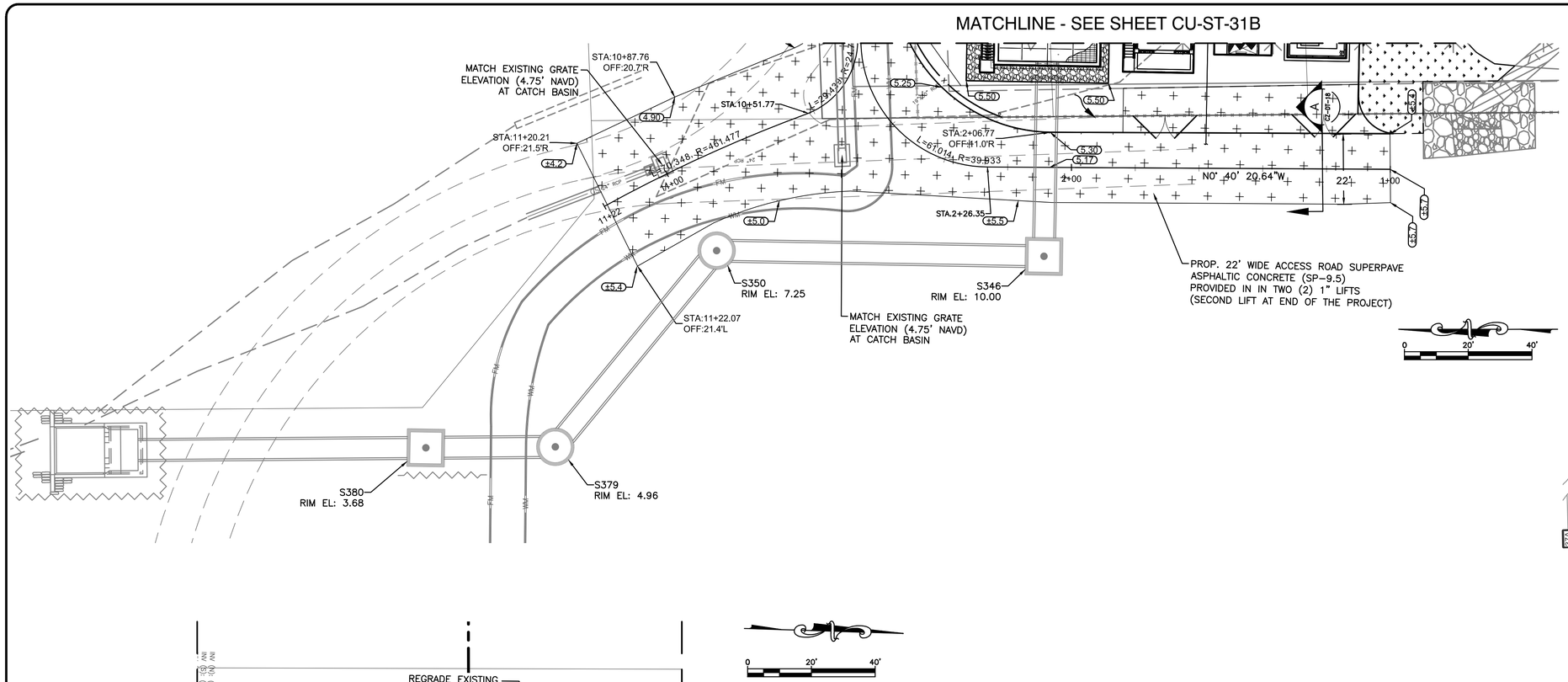
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

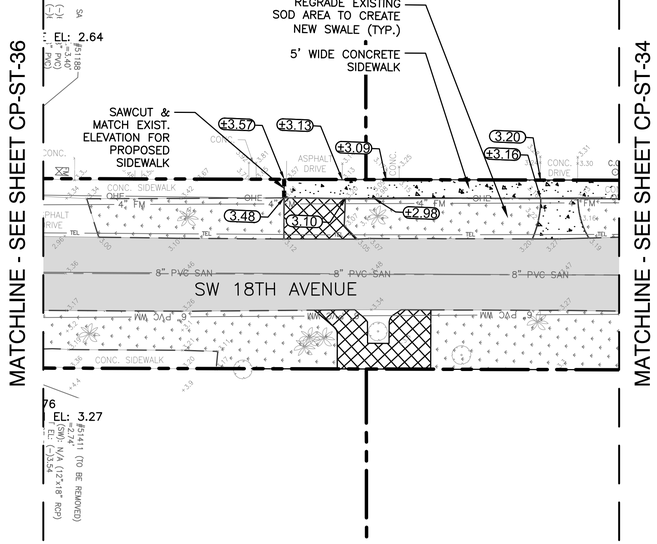
SHEET NO.
CP-ST-32

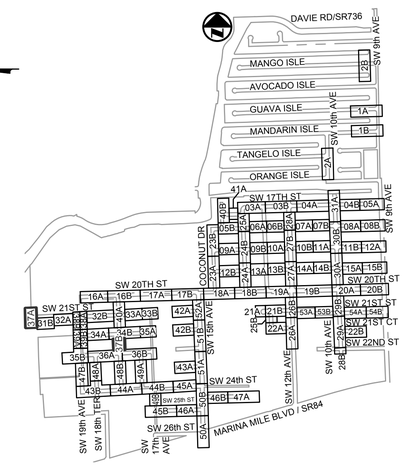
TOTAL: 254

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42







KEY MAP

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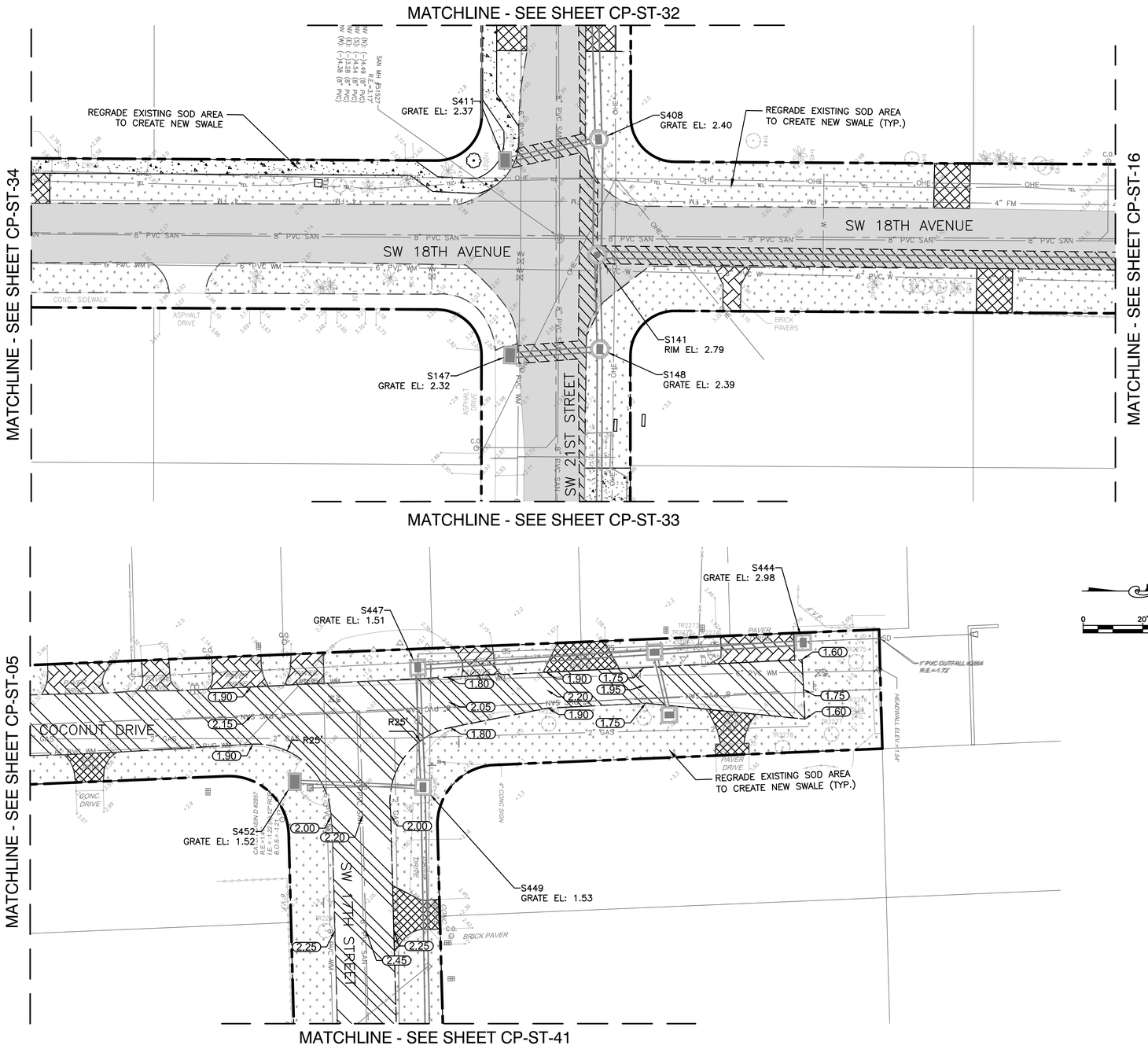
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-37
TOTAL: 254
CAD FILE: 11868-CP-ST-B
DRAWING FILE NO. 4-142-42



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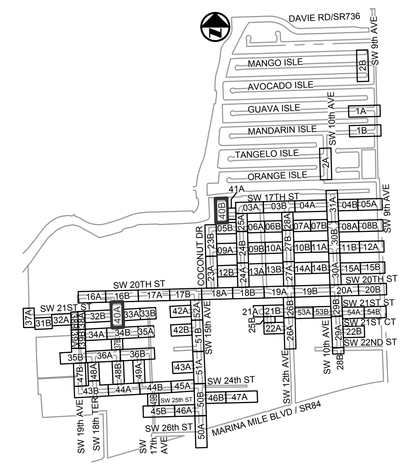

KEY MAP

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REG. No: 49428
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TEL: 954-987-0066
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DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	AOS	ADD. #5 – REISSUED SHEET

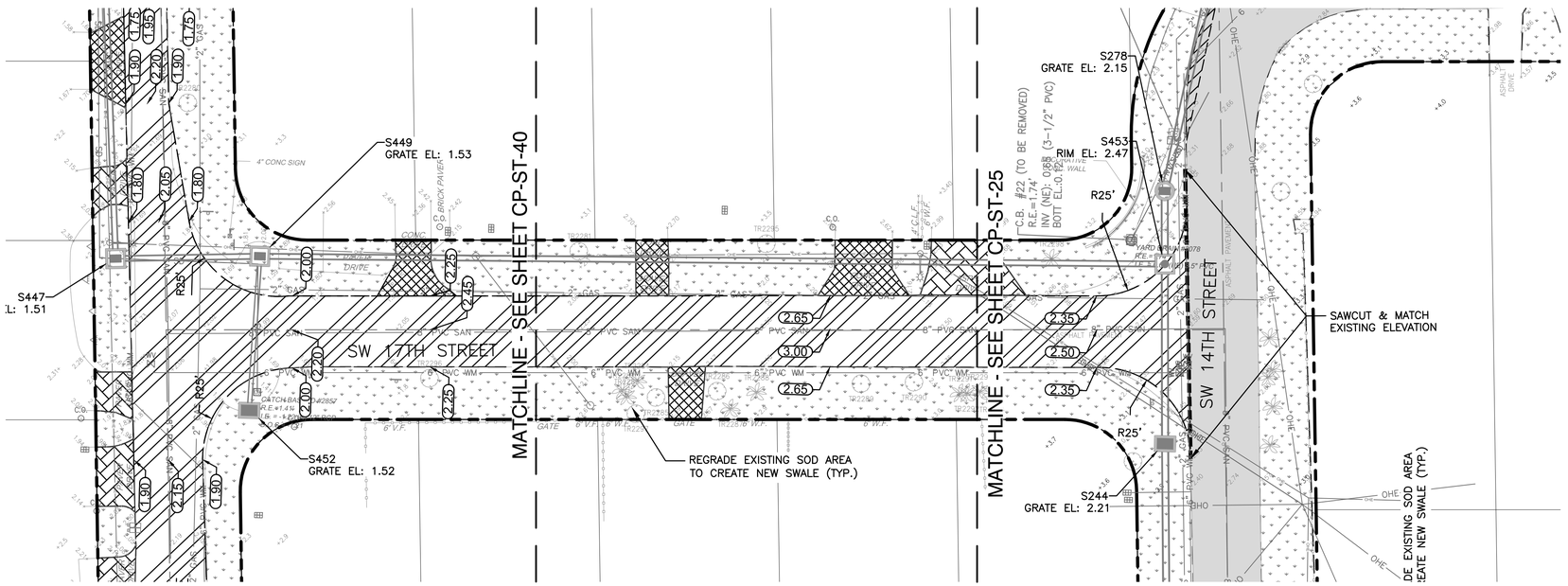
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

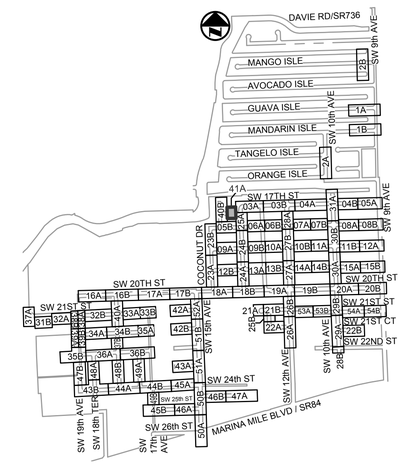
SHEET NO.
CP-ST-40

TOTAL: 254

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42





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DRAWN BY:	DATE:	DESIGNED BY:	SCALE:	CHECKED BY:	FIELD BOOK:
XXX	01/07/2019	XXX	1"=20'	XXX	XXXX

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ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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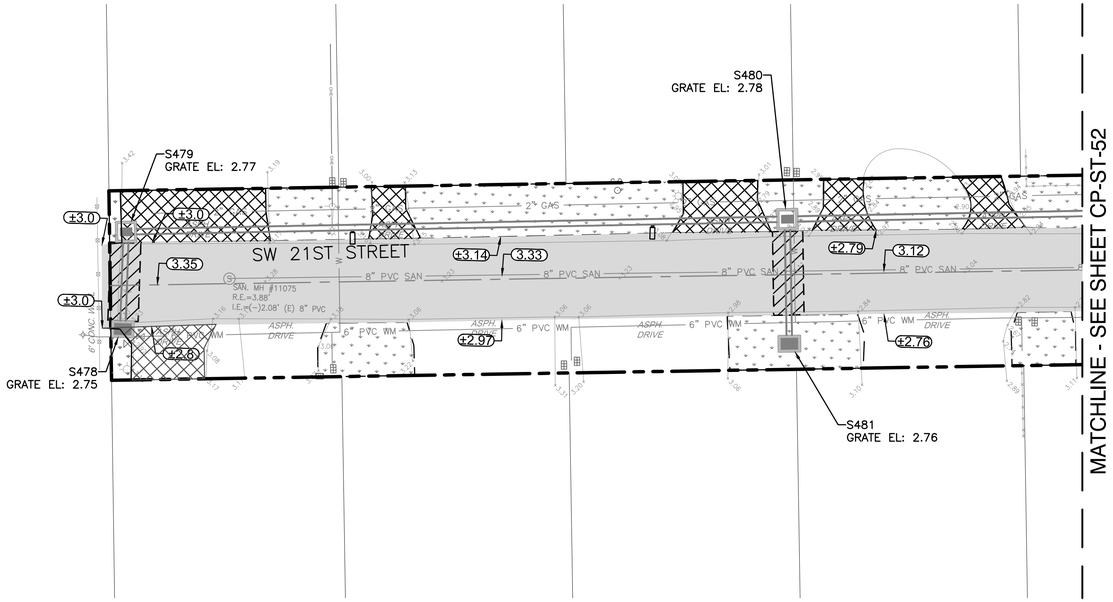
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

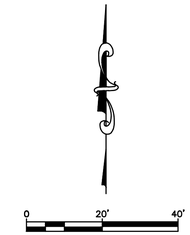
SHEET NO.
CP-ST-41

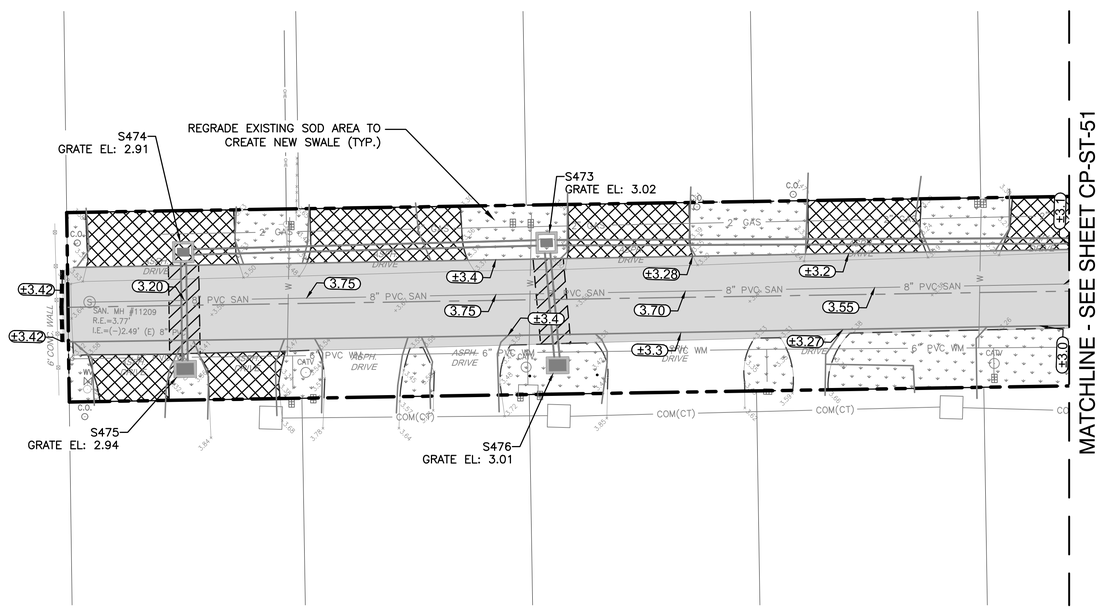
TOTAL: 254

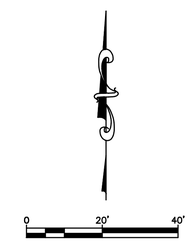
CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42









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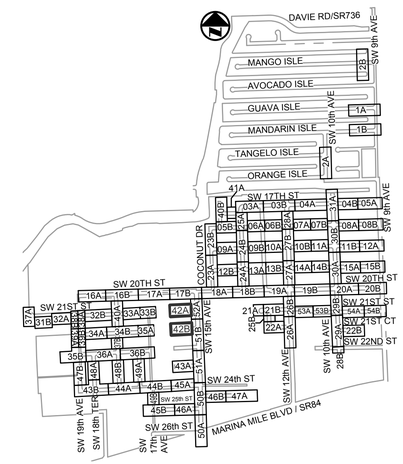

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DRAWN BY:	DATE:
XXX	01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428 This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.
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PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

BID SET

SHEET NO.
CP-ST-42
TOTAL: 225
CAD FILE: 11868-CP-ST-C
DRAWING FILE NO. 4-142-42

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIS PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.

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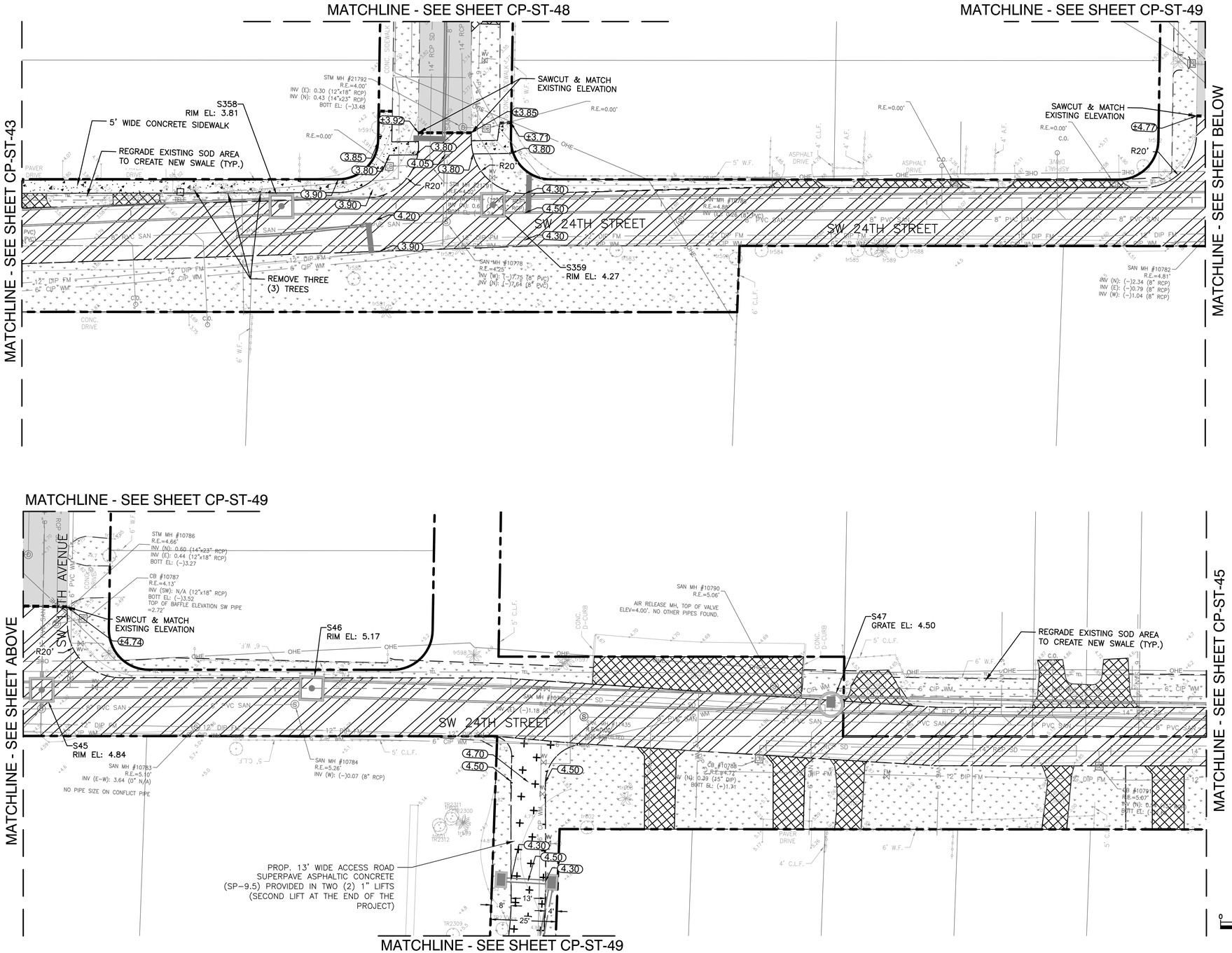
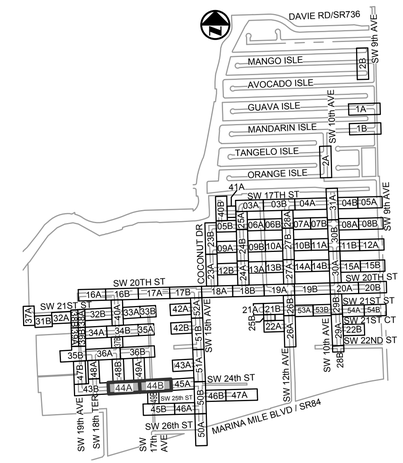
Sunshine811.com





KEY MAP

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4/6/2021

BID SET

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021
Certificate of Authorization No: 2771

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

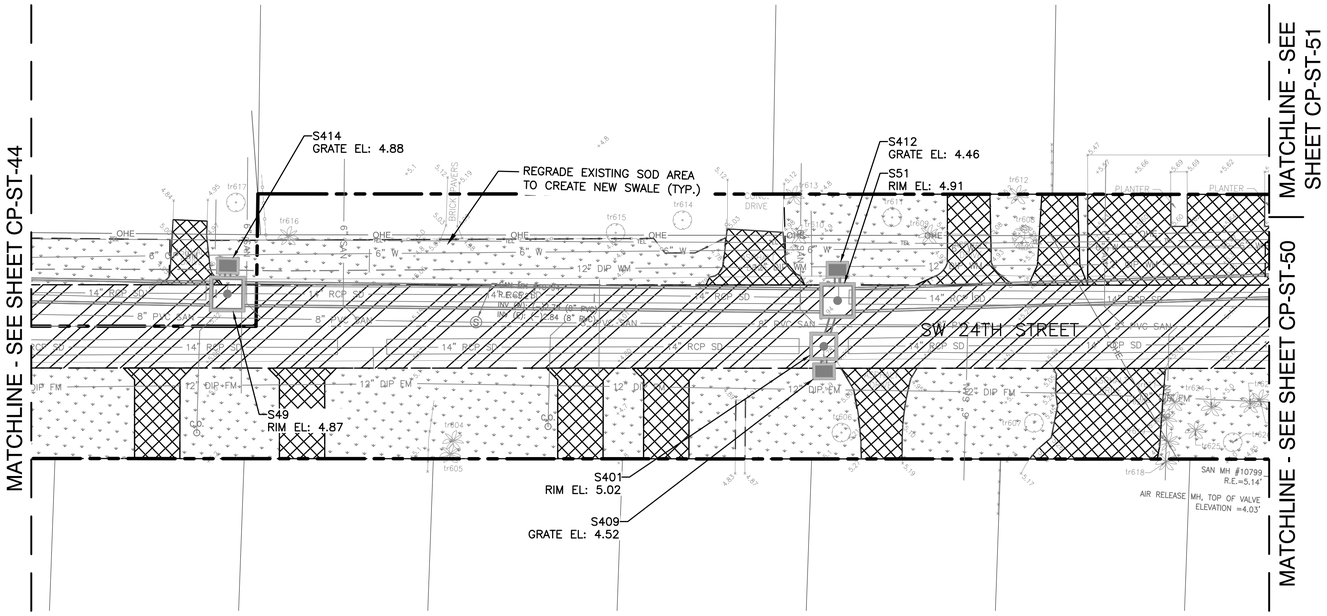
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

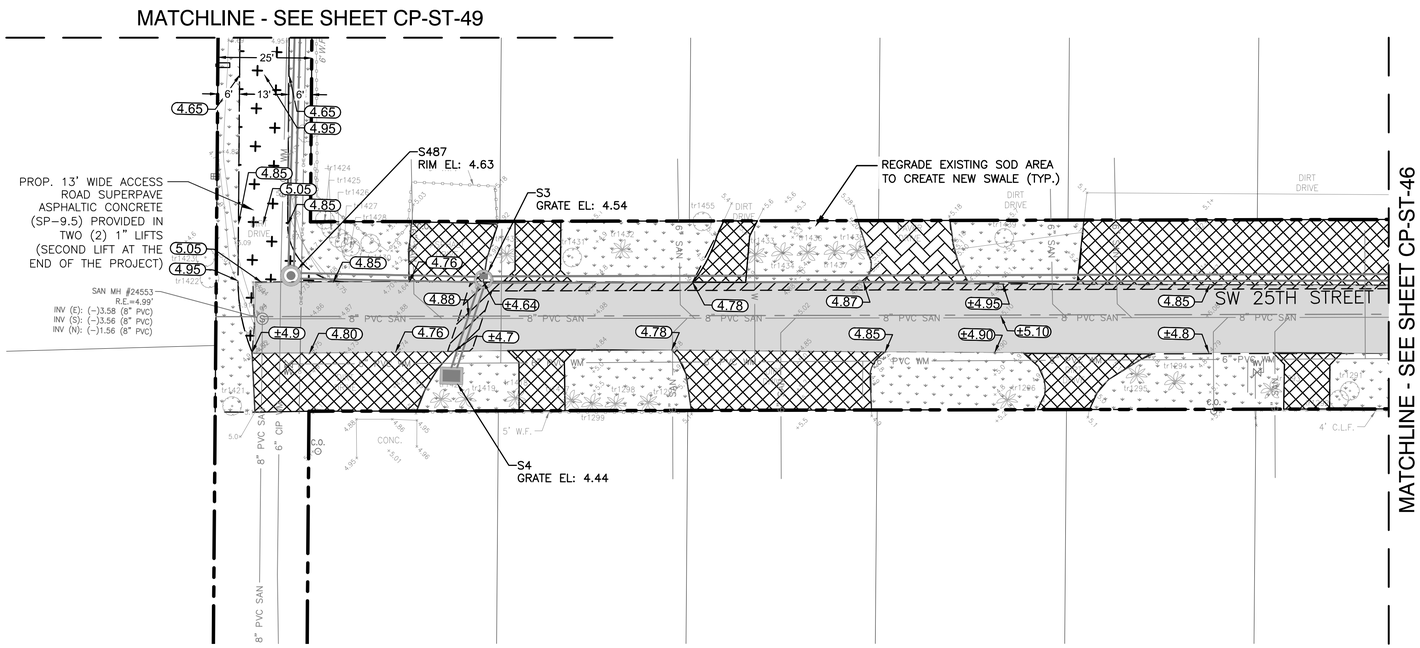
SHEET NO.
CP-ST-44

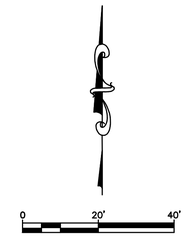
TOTAL: 254

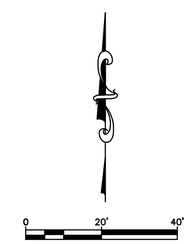
CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42









Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
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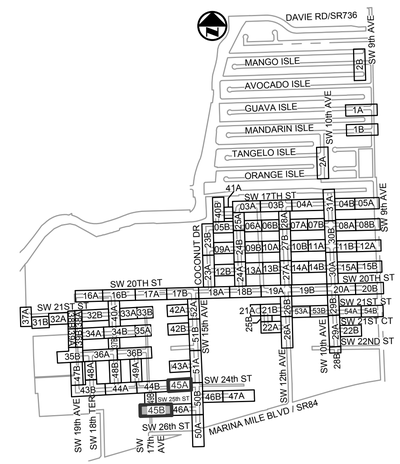

KEY MAP
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BID SET

ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY:	DATE:
XXX	01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

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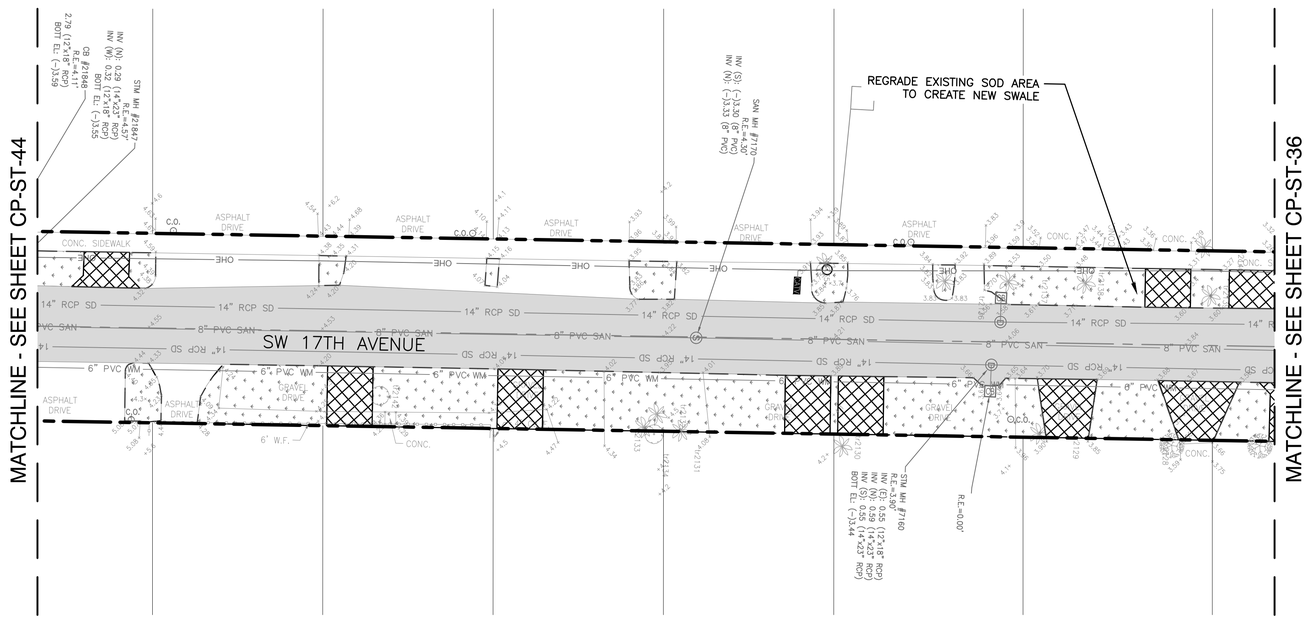
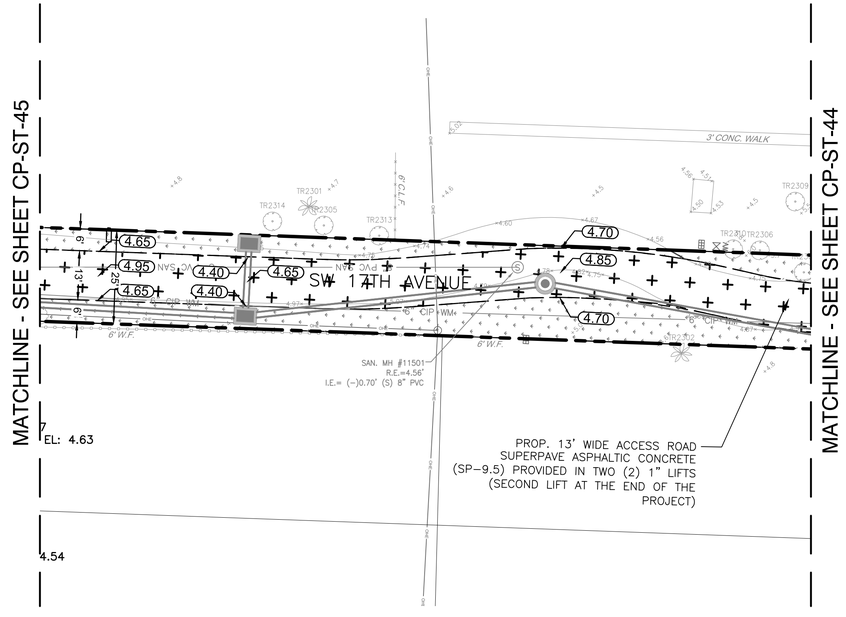
4/6/2021

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-45
TOTAL: 254
CAD FILE: 11868-CP-ST-C
DRAWING FILE NO. 4-142-42





0 20' 40'

0 20' 40'

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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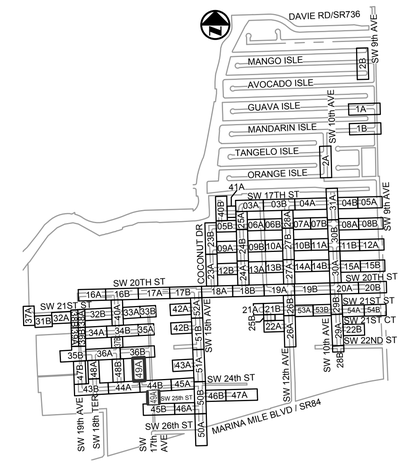

KEY MAP
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DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 SHEET ADDED TO SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-49
TOTAL: 254
CAD FILE: 11868-CP-ST-C
DRAWING FILE NO. 4-142-42

PLOT DATE: 4/6/2021 12:55 PM BY: MRODRIGUEZ
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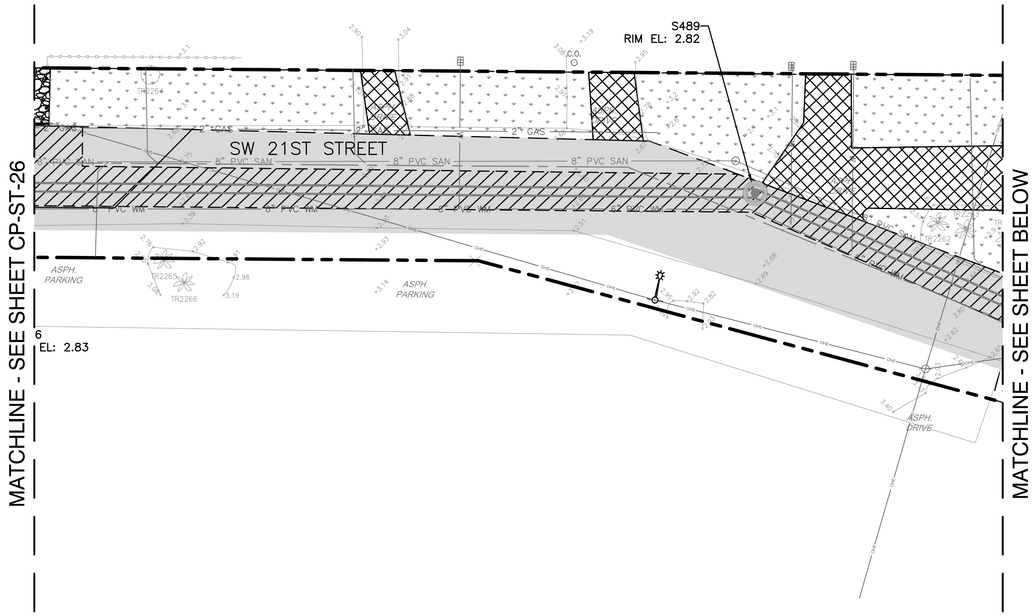

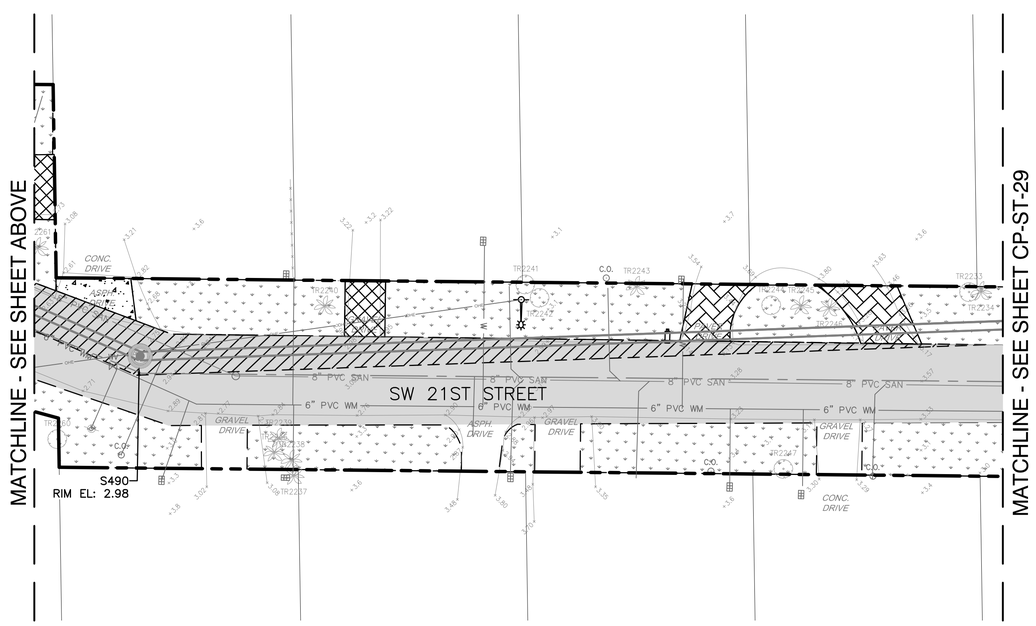

Hazen

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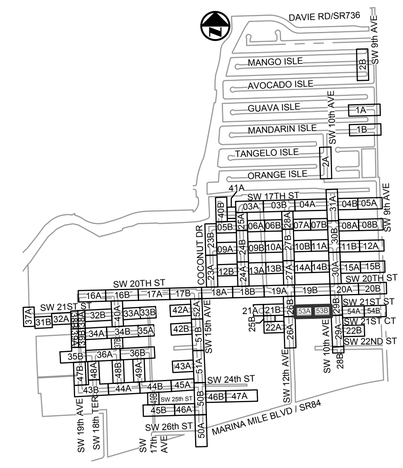

KEY MAP
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DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

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RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

BID SET

SHEET NO.
CP-ST-53
TOTAL: 254
CAD FILE: 11868-CP-ST-A
DRAWING FILE NO. 4-142-42

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2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET C2-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIS PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.

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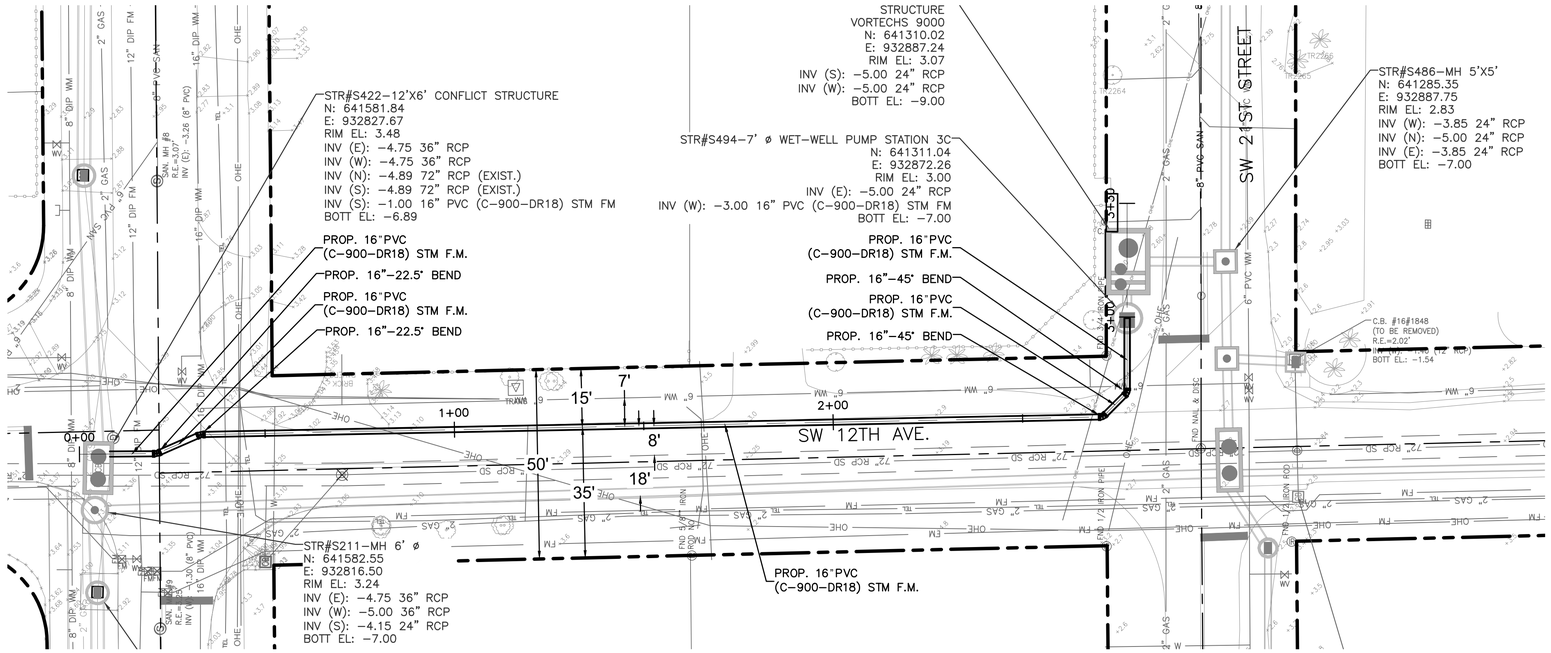
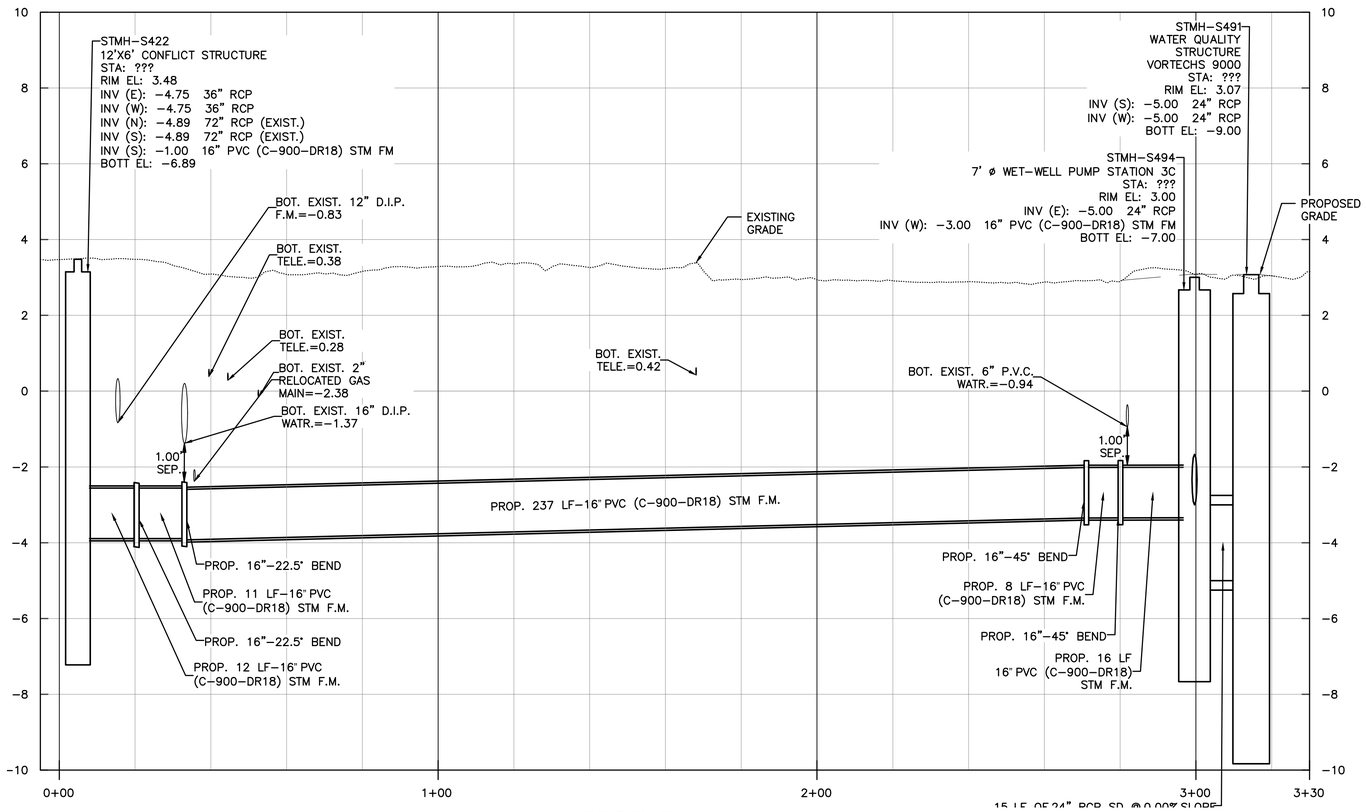


PLAN

SCALE: 1"=20'



PROFILE

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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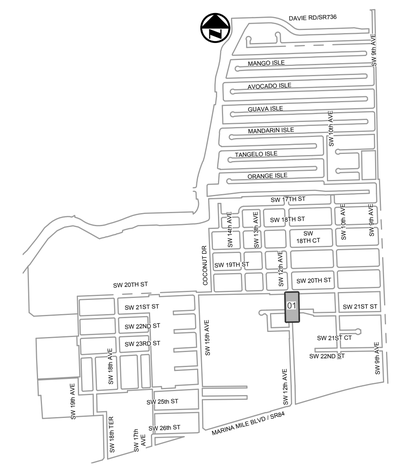

KEY MAP

N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ−DT−22).
3. TEMPORARY RELOCATION OF EXISTING SERVICES AND LATERALS MAY BE REQUIRED TO FACILITATE CONSTRUCTION OF THE PROJECT. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK.
4. CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT−FILLED WATER MAINS.
5. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION & MAINTAINING TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER & SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE IMPROVEMENTS.
6. SANITARY SEWER LATERALS MAY BE REQUIRED TO PASS UNDER PROPOSED STORM DRAIN, WATER MAIN, ETC. IN ORDER TO PROVIDE SERVICE TO EXISTING PROPERTIES AND CONNECT TO EXISTING LATERALS. CONTRACTOR SHALL VERIFY EXISTING LATERAL LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.
7. ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62−6110, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62−610, F.A.C.

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4/6/2021

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BID SET

ENGINEER: PATRICK J. GIBNEY
REG. No: 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: 1"=20'
CHECKED BY: XXX	
FIELD BOOK: XXXX	

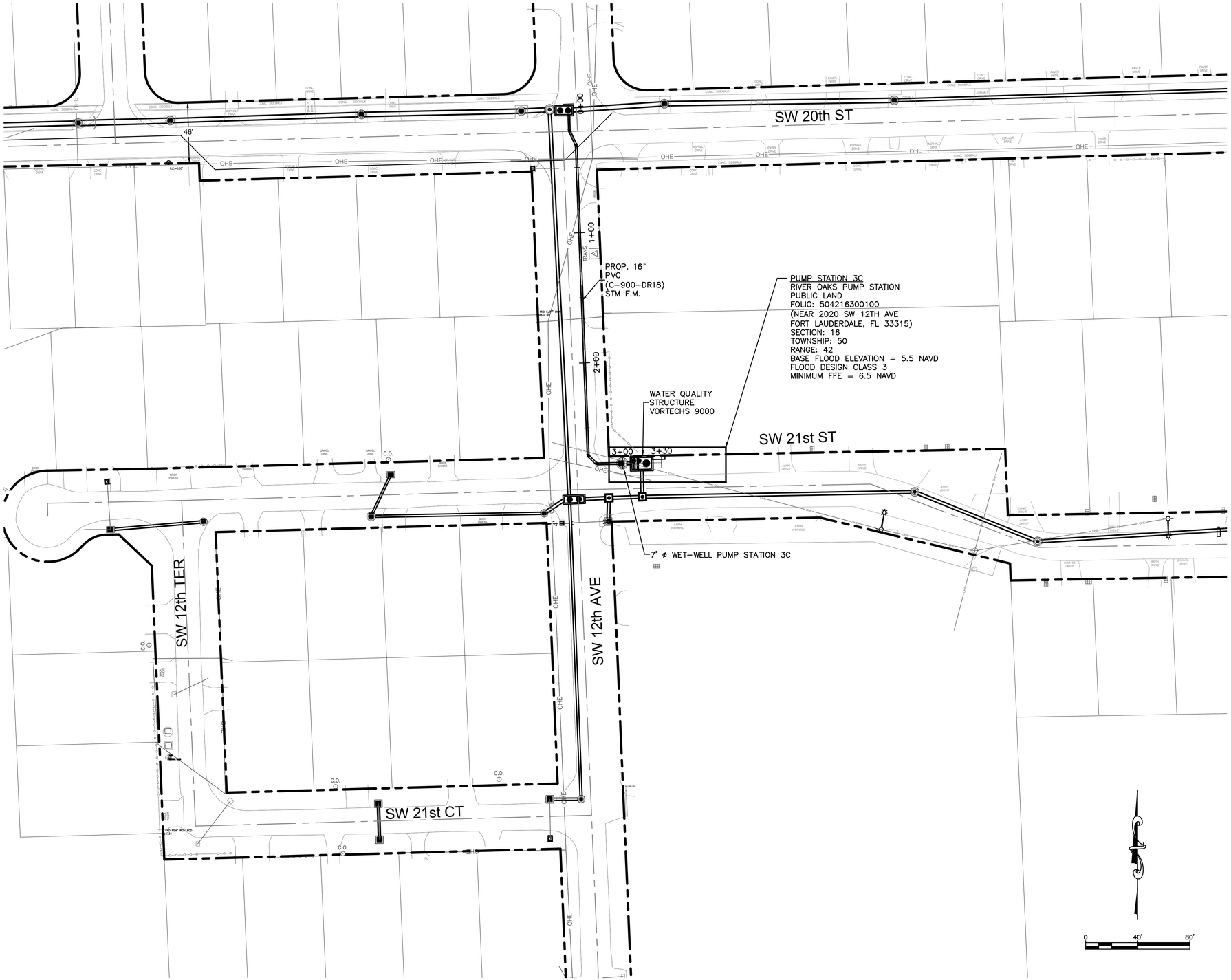
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 − REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
STORMWATER FORCE MAIN PLAN & PROFILE

SHEET NO.
CU-SU-01
TOTAL: 254
CAD FILE: 11868−CU−SU
DRAWING FILE NO. 4−142−42



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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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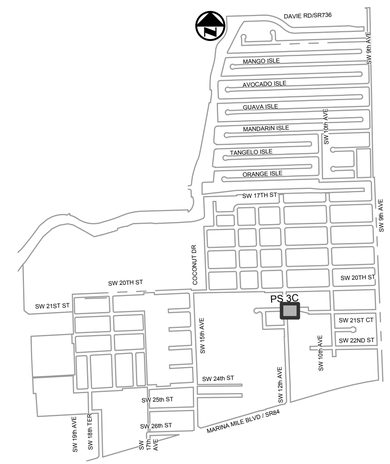

KEY MAP
N.T.S.

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DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX	DATE: 01/07/2019
DESIGNED BY: XXX	SCALE: SEE PLAN
CHECKED BY: XXX	
FIELD BOOK: XXXX	

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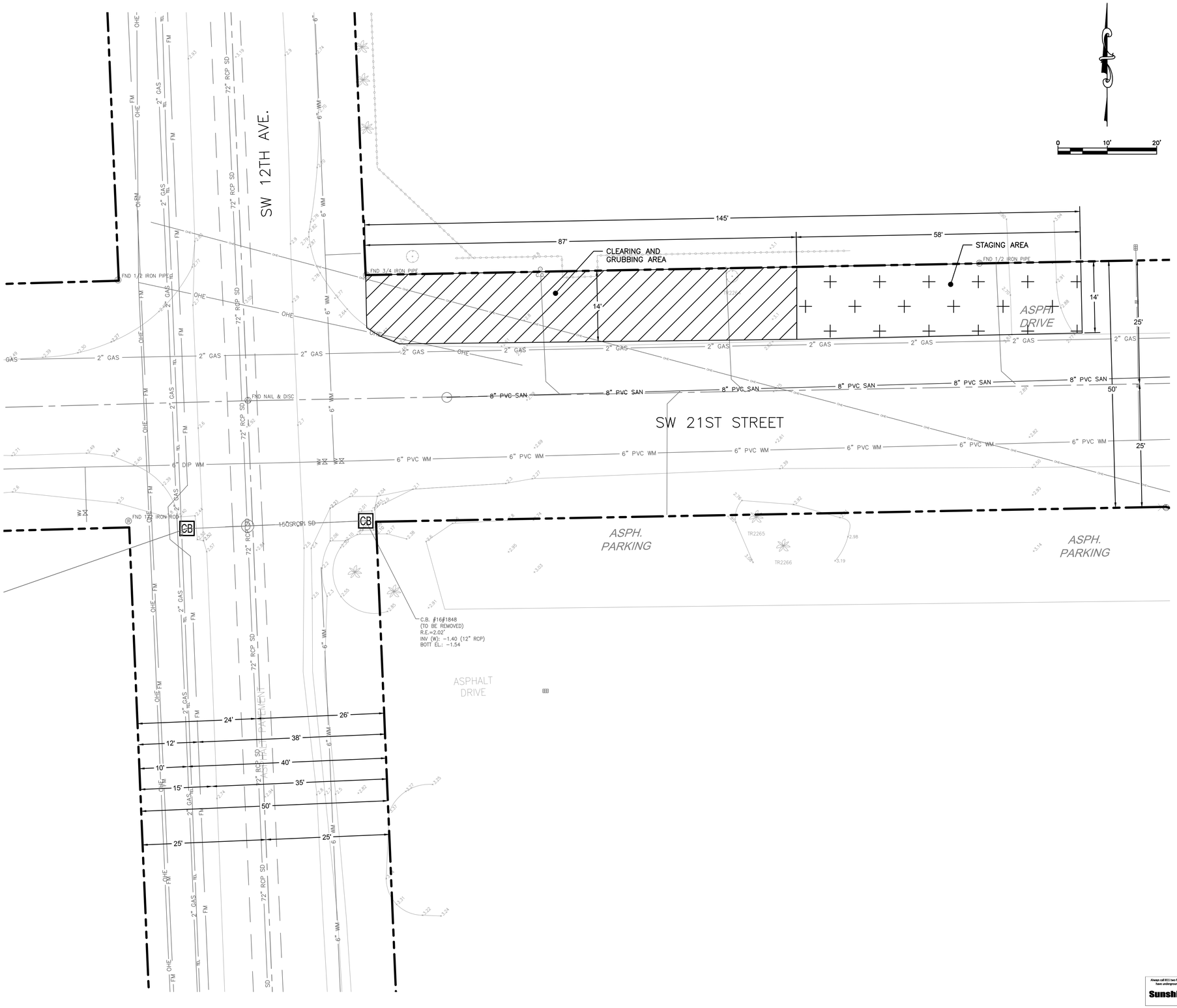
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION KEY MAP

SHEET NO.
CU-3C-01
TOTAL: 254
CAD FILE: 11868-3C-01
DRAWING FILE NO. 4-142-42



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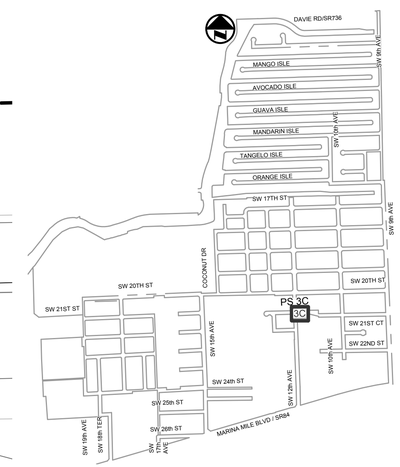

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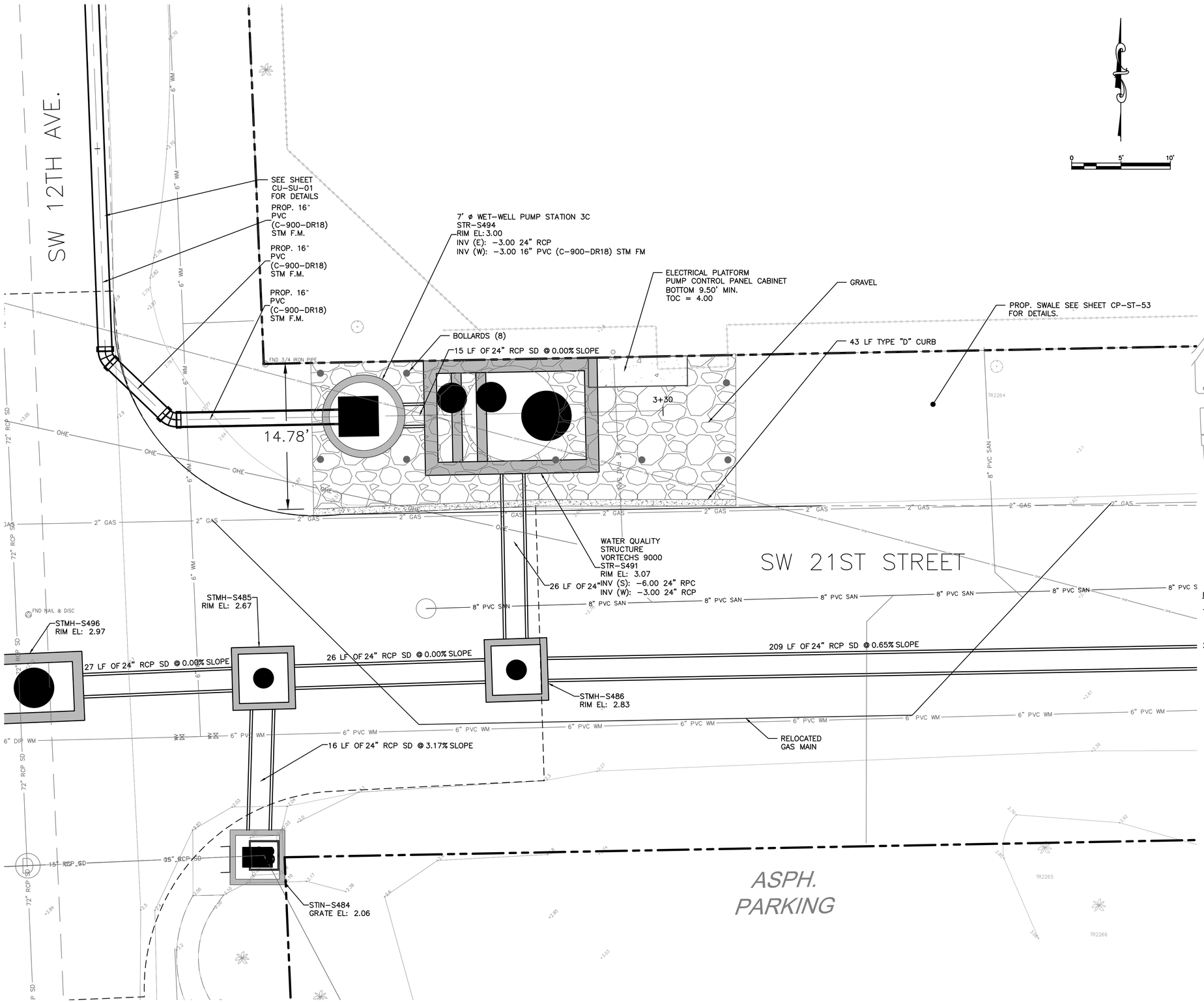
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION EXISTING SITE
AND DEMOLITION PLAN

SHEET NO.
CU-3C-02
TOTAL: 254
CAD FILE: 11868-3C-02
DRAWING FILE NO. 4-142-42



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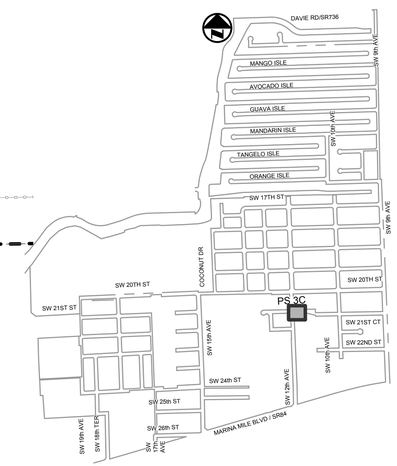

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TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY:	DATE:	DESIGNED BY:	SCALE:	CHECKED BY:	FIELD BOOK:
XXX	01/07/2019	XXX	SEE PLAN	XXX	XXXX

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION PROPOSED SITE PLAN

SHEET NO.
CU-3C-03
TOTAL: 254
CAD FILE: 11868-3C-03
DRAWING FILE NO. 4-142-42

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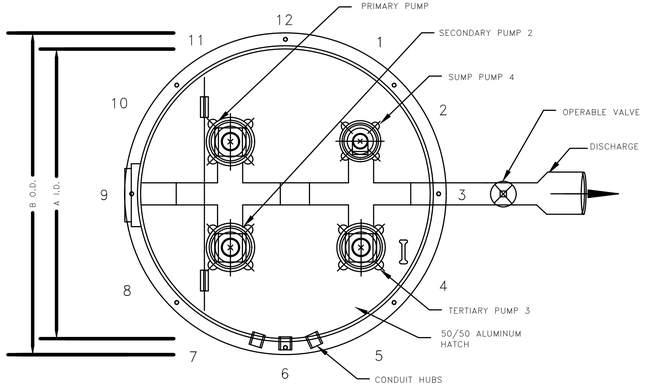
FIELD BOOK: XXXX

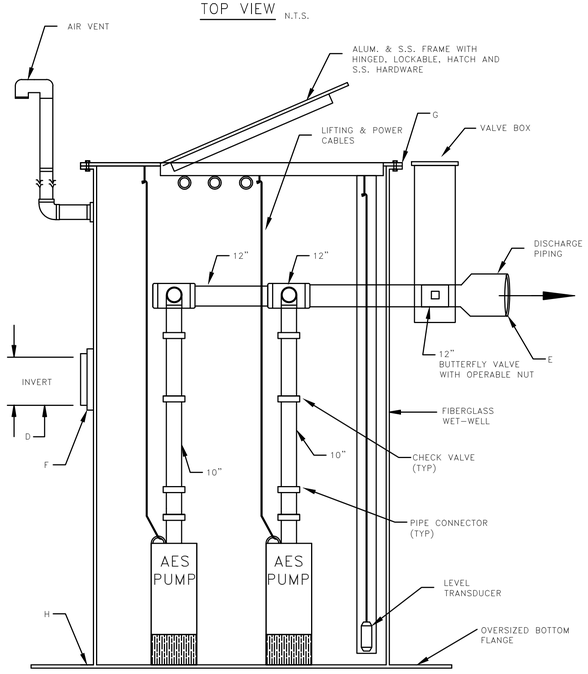
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

HUB AND INVERT LOCATION

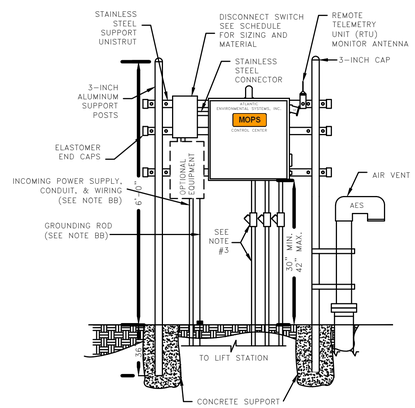
ITEMS	CLOCK POSITION
DISCHARGE LINES	3:00
PRIMARY INVERT	X:00
SECONDARY INVERT	X:00
LOCATION OF CONTROL PANEL	X:00



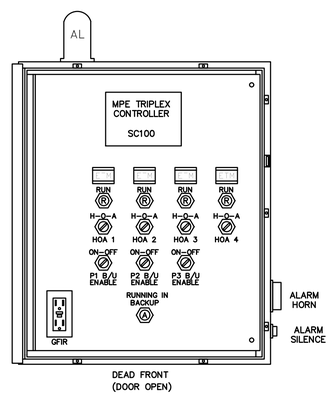
TOP VIEW N.T.S.

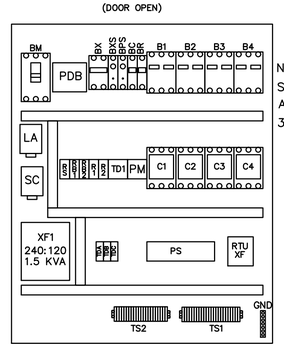


SECTION VIEW N.T.S.



CONTROL CENTER ASSEMBLY AND INSTALLATION N.T.S.





ENCLOSURE

NEMA 4X Stainless Steel
Single Door w/ Padlock Hasp
Aluminum Inner Door(Dead Front)
36"H X 30"W X 10"D

AES

ATLANTIC ENVIRONMENTAL SYSTEMS, INC.
LAKE WORTH, FL 33461
PH: (561) 547-8080 FAX: (561) 547-3999

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STORMWATER SERIES

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AES PUMP STATION SCHEDULE

SERIES		ITEM DESCRIPTION		
INITIAL DESIGN FLOW (G.P.M.)	SEE BELOW	A	INSIDE DIAMETER OF WET-WELL	84"
INITIAL DESIGN HEAD (T.D.H.)	SEE BELOW	B	OUTSIDE DIAMETER OF WET-WELL'S ANTI-FLOATATION FLANGE	108"
RATED PERFORMANCE SPEED	1750			
RATED MOTOR HORSEPOWER	SUMP/15/20	C	DEPTH OF WET-WELL	10'
SUBMERSIBLE PUMP TYPE (P=1)	STORMWATER	D	INVERT PIPE DIAMETER	24"
PUMP MODEL NUMBER	MOPS	E	FORCE MAIN DIAMETER	16"
SERVICE ENTRANCE VOLTAGE	230	F	INVERT ELEVATION	-3.00'
SERVICE ENTRANCE PHASE	3	G	RIM ELEVATION	3.00'
CONTROL CENTER FULL LOAD AMPS	169	H	BOTTOM ELEVATION	-7.00'

EQUIPMENT IDENTIFICATION	QTY.	MODEL DESIGNATION
PUMP STATION	1	SW410-84120-C-15/20/20
ODOR/GAS SCRUBBER (OGS)	0	N/A
CONTROL CENTER	1	PSC-432-15/20/20
CONTROL CENTER MOUNTING ASSEMBLY	1	CCMA-32AL
DISCONNECT SWITCH	1	FDS-200-3-2-PS
REMOTE STATION MONITOR	0	OPTIONAL
1st YEAR SERVICE/MAINTENANCE CONTRACT	0	OPTIONAL

PUMP STATION OPERATION:

THE PUMP STATION IS DESIGNED TO HANDLE THE EXPECTED RAIN EVENTS AT THE SITE. THE SUMP PUMP WILL PUMP ALL SMALL RAIN WATER FLOWS FROM THE AREA AND KEEP THE WET-WELL WATER LEVEL LOW OR EMPTY TO ELIMINATE POTENTIAL ODORS FROM STAGNANT WATER.

THE PUMPS WILL TURN ON IN SERIES DEPENDING ON THE RAIN EVENT. WHEN PUMP # 1 CANNOT HANDLE THE INCOMING FLOW, THEN PUMP # 2 WILL START PUMPING. SHOULD PUMP # 1 AND PUMP # 2 NOT KEEP UP WITH THE INCOMING WATER, PUMP # 3 WILL START PUMPING. ALL PUMPS WILL REMAIN ON UNTIL THE WATER-LEVEL RECEDES TO A LEVEL WHERE PUMP # 1 IS THE ONLY PUMP REQUIRED TO EVACUATE THE RAIN WATER FROM THE WET-WELL.

THE STORM EVENTS WERE PROVIDED BY THE PRIME ENGINEER. AES DID NOT PERFORM ANY STORMWATER CALCULATIONS. THE STATION WAS DESIGNED AND SIZED PER THE PRIME ENGINEER'S STORMWATER CALCULATIONS.

PUMP STATION PERFORMANCE	PUMP RATE IN GALLONS PER MINUTE
A) PUMP # 1	1,660 GPM @ 13' TDH
B) PUMP # 1 AND PUMP # 2	3,550 GPM @ 18' TDH
C) PUMP #1, PUMP # 2, AND PUMP # 3	5,100 GPM @ 23' TDH

P.E. CERTIFICATION:

Bonnie McLeod, P.E., Lic # 70797 V.P. of Engineering
Atlantic Environmental Systems, Inc., Certificate # 26398
2244 4th Ave. North, Lake Worth, Florida 33461
Ph: 561-547-8080 Fax: 561-547-3999

REVISION	DATE
---	--/--/--
---	--/--/--
---	--/--/--
---	--/--/--

Project: RIVER OAKS STORMWATER
Prepared For: CRAVEN & THOMPSON, INC.
3563 NW 53RD STREET, FT. LAUDERDALE, FL 33309

AES Project No: 1548
Date: 03/11/2021

Page No. SW-1

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4/6/2021

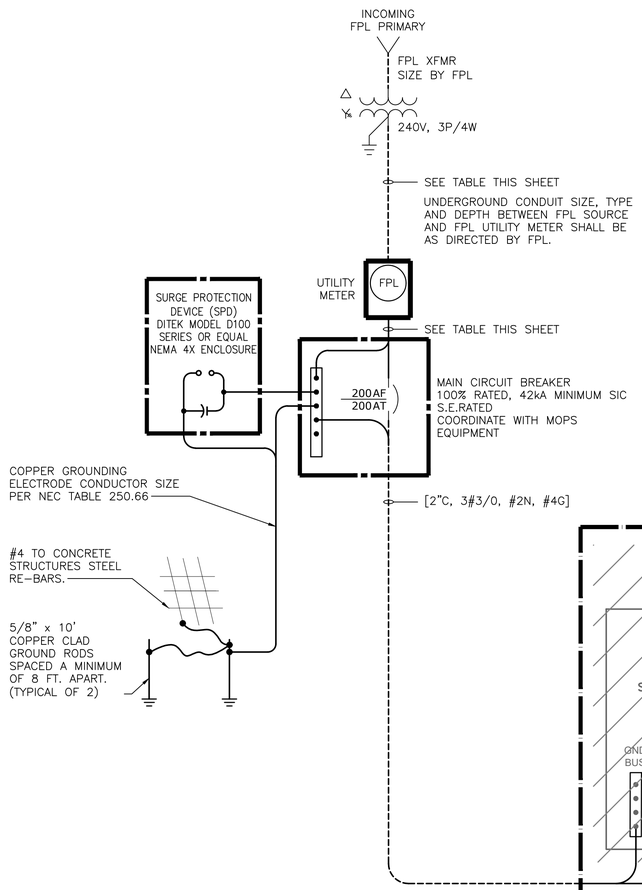
BID SET

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1.	04/07/21	MR	ADS	ADD. #5 - REISSUED SHEET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION PROPOSED PLAN

SHEET NO. CU-3C-04
TOTAL: 254
CAD FILE: 11868-3C-04
DRAWING FILE NO. 4-142-42



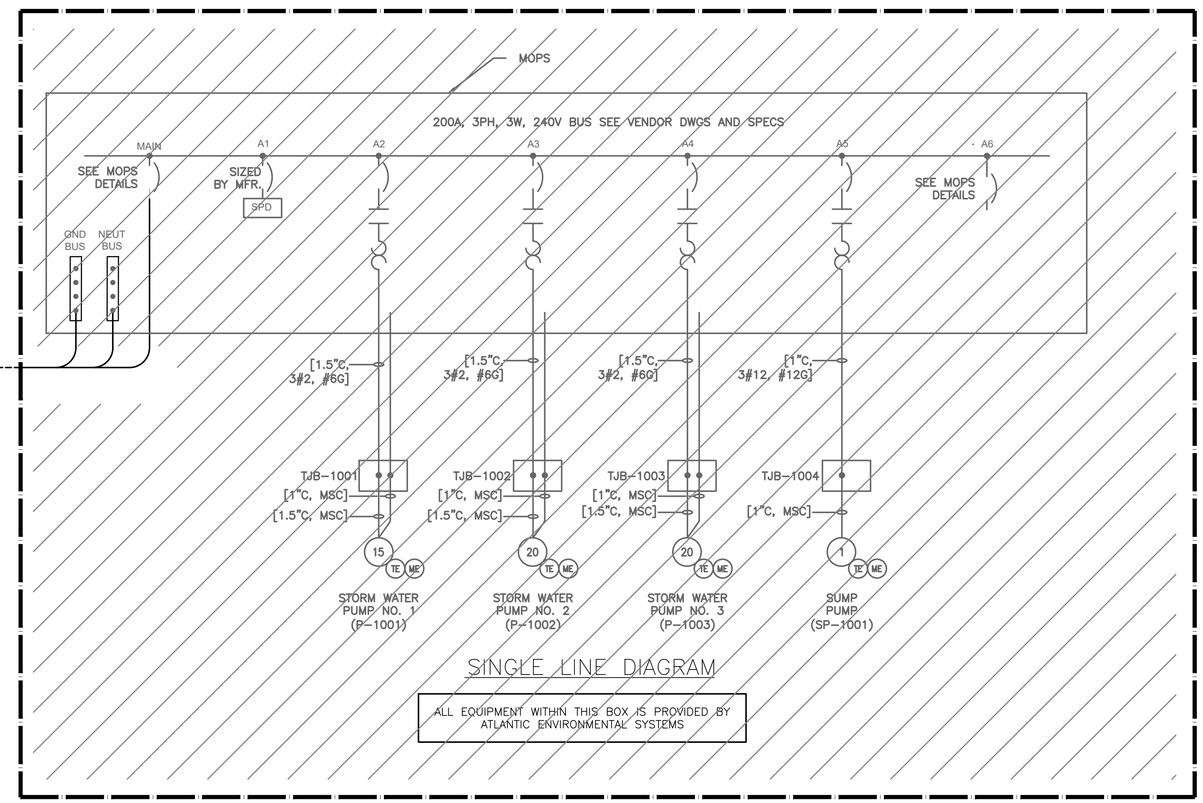
RIVER OAKS SWPS ELECTRICAL SERVICE WIRING

DISTANCE BETWEEN PS AND SERVICE SOURCE POINT	MINIMUM SERVICE CONDUIT	MINIMUM SERVICE WIRE SIZE
<= 200 FT	2" PVC COATED RGS	(3) 3/0, (1)#4
> 200 FT <=300	2.5" PVC COATED RGS	(3) 4/0, (1)#4
> 300 FT <=450	3" PVC COATED RGS	(3) 300 kcmil, (1)#3

DIRECT BURIED SERVICE WIRING CONDUITS SHALL BE A MINIMUM OF 36 INCHES BELOW GRADE AND SHALL HAVE A 3 INCH WIDE RED POLYETHYLENE "CAUTION BURIED ELECTRIC LINE BELOW" WARNING TAPE INSTALLED 18 INCHES BELOW THE SURFACE ABOVE THE UNDERGROUND LINE FOR THE COMPLETE LENGTH OF THE BURIED CONDUIT.

RIVER OAKS SWPS ELECTRICAL SERVICE LOAD CALCULATIONS

LOAD DESCRIPTION	CONNECTED AMPS	OPERATING AMPS
PUMP NO. 1 @ 15HP	42	38
PUMP NO. 2 @ 20HP	54	49
PUMP NO. 3 @ 20HP	54	49
PUMP NO. 4 @ 1HP	3	-
LCP AUXILIARY LOADS	12	10
25% OF LARGEST MOTOR LOAD	14	-
TOTALS @ 240V, 3PH	179	145
FPL SERVICE REP & PHONE NO.	Noah Sherbacoff	(954) 717-1430
FPL AVAILABLE FAULT CURRENT:	_,___ A	



NOTES:

1. BASIS OF DESIGN IS MOPS PUMP STATION MODEL SW410-84120-C-15/20/20 INCLUDING CONTROL CENTER PSC-432-15/20/20. ANY ADDITIONAL COSTS FOR DESIGN CHANGES WHICH ARISE DUE TO PROCUREMENT OF ALTERNATIVE PUMPS SHALL BE BORNE BY THE CONTRACTOR.
2. ALL CONDUIT SHALL BE PVC COATED RIGID GALVANIZED STEEL. SEE TABLE THIS SHEET FOR RECOMMENDED MINIMUM SIZES.
3. ALL WIRING BELOW GRADE SHALL BE XHHW COPPER.
4. ALL METAL ENCLOSURES AND SUPPORTS SHALL BE BONDED TO THE GROUNDING SYSTEM.
5. SEE ATLANTIC ENVIRONMENTAL SYSTEMS, INC. DRAWINGS FOR ADDITIONAL PUMP STATION DETAILS.
6. CONTRACTOR SHALL ASSUME MAXIMUM DISTANCE OF 450-LF BETWEEN PUMP STATION AND UTILITY ELECTRIC SERVICE POINT FOR PURPOSES OF ESTABLISHING A BID PRICE.

BY ATLANTIC ENVIRONMENTAL SYSTEMS

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

ENGINEER: JOHN C. BURKE
REG. No: 73301
DATE: 04/02/2021
TEL: 954-987-0066
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DRAWN BY: JMB | DATE: 04/02/2021
DESIGNED BY: JMB | SCALE: NTS
CHECKED BY: JCB | FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1	04/07/21	JMB	JCB	ADD #5 SHEET ADDED TO SET

PROJECT # 12074
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION PROPOSED
ELECTRIC UTILITY WIRING

SHEET NO.
CU-3C-05
TOTAL: 246
CAD FILE: CU-3C-05
DRAWING FILE NO. 4-142-42